

MAC

and the Legacy of the Berlin Airlift



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Berlin Airlift**

**Military Airlift Command
Office of History
Monograph**

**by
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PREFACE TO SECOND PRINTING

Much has changed in Europe and elsewhere since this study was first published nearly ten years ago. The Soviet Union and the Warsaw Pact have collapsed. The Berlin Wall has been torn down, and Berlin is once more the capital of a unified Germany.

Despite these far-reaching changes, the Berlin Airlift remains a pivotal event in the history of the Cold War. It marks the beginning of America's resistance to Soviet expansion. Since the end of the Berlin Airlift in September 1949, the United States has consistently called upon military airlift to help achieve national policy objectives.

Following the end of the Cold War, the United States Air Force was reorganized. In 1992, the Military Airlift Command and the Strategic Air Command were inactivated. Airlift and tanker aircraft were merged into a new organization, the Air Mobility Command. Operation VITTLES remains an essential part of the new command's heritage. As the United States Air Force celebrates its fiftieth anniversary and the Air Mobility Command commemorates its fifth year of providing rapid global reach for America, it is most fitting that this study be republished.

ROBERT T. COSSABOOM
Command Historian

PREFACE

This monograph, issued at the fortieth anniversary of the Berlin Airlift, recalls a critical episode in the history of American military airlift. Previous works on this subject have examined the diplomacy of the crisis, the decision to implement the airlift, and the actions that ended the blockade. Most of these analyses, however, have stressed other, particularly diplomatic, facets of the operation, relegating the actual airlift to the background. While acknowledging the magnitude of Operation VITTLES, the code-name for the airlift, they have ignored the details of the airlift's organization, procedures, logistics, management, and command. This study emphasizes these aspects of the Berlin Airlift, because the lessons of Operation VITTLES have shaped American airlift operations ever since. This is not a comprehensive study, but one limited to the "nuts and bolts" of the organizational and operational responses to the Berlin Crisis' unique challenges. These responses have helped to shape the airlift doctrine and procedures of the Military Airlift Command, the heir to the legacy of the Berlin Airlift, since that time.

Numerous individuals both from the military and civilian communities contributed to this historical monograph. We owe thanks especially to the other staff members of the Office of MAC History: Dr John W. Leland, Ms Betty R. Kennedy, Dr Jeffery S. Underwood, Ms Kathy Wilcoxson, and Ms Mary Anna Kaufer. We also extend our appreciation to Ms Joy Gustin and Ms June Dobrinich, both of whom recently retired from this office. Gen T.R. Milton, Lt Gen Joseph Smith, and Col Gail S. Halvorsen, all USAF retired, took an interest in this monograph and provided us with valuable information. The staffs of the United States Air Force Academy Library; the Office of Air Force History, Bolling AFB, DC; the USAF Historical Research Center, Maxwell AFB, Alabama; the National Archives and Records Administration; and the Truman Library, Independence, Missouri, facilitated the research for the project. The Command Section of the Military Airlift Command provided support to ensure this project was published. Many others also provided assistance and encouragement. To each, we say thank you.

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TABLE OF CONTENTS

Preface	i
Table of Contents	iii
List of Tables, Figures and Illustrations	iv
Introduction	1
Origins of a Crisis	1
Second Thoughts	16
Transferring Aircraft to the Airlift Task Force	18
MATS Takes a More Active Role	26
The Tunner Airlift Philosophy	32
The MATS Management Element	34
The Search for Bases	40
A Pattern of Operations	43
The End of the Airlift	51
Dismantling the Airlift	55
An Airlift Tally	58
Assessment	65
Bibliography	68
Index	74

LIST OF TABLES, FIGURES, AND ILLUSTRATIONS

TABLES

C-54 Transfers to Berlin Airlift Task Force	20
American Aircraft Flying the Berlin Airlift	23
Summary of Harassment Incidents in Air Corridor	52
Cargo Transported During Berlin Airlift	58
Airlift Operation Summary: Tonnage Delivered	59
Berlin Airlift Totals	60
Units Participating in Berlin Airlift	61-63
Consolidated Airlift Dollar Costs	64

FIGURES

Map of Germany	2
Air Corridors to Berlin	9
Airspace Over Berlin	30

ILLUSTRATIONS

General Lucius D. Clay	3
C-47s at Tempelhof	7
Unloading Flour at Tempelhof	8
Brigadier General Joseph Smith	10
Diagram Explaining the Airlift Flow	12
Hangars at Tempelhof Airdrome	14
Monthly Tonnage Chart	15
Unloading Coal from C-54s	18
Major General Laurence S. Kuter	21
Major General William H. Tunner	27
Airlift Organizational Chart	28
Airspace over Berlin	44
Final Approach to Tempelhof	45
Lieutenant Gail Halvorsen	49
"Operation Little Vittles"	50
C-54s on the Ramp at Weisbaden	51
End of the Blockade	53
The Last Flight of Berlin Airlift	54
German Children Watching C-54	65

MAC AND THE LEGACY OF THE BERLIN AIRLIFT

INTRODUCTION

The United States entered World War II “with only the basic types of military aircraft, the bomber and the fighter,” Major General Robert M. Webster, Air Transport Command (ATC) Commander, informed a National War College class in 1947. He quickly added, “I feel that we have come out of that war with an additional type, the transport plane, and that we should think in terms of bomber-fighter-transport—since they are all equally important—and they must be properly balanced to each other if we are to be prepared to conduct successful war operations.”¹ The early years of the Cold War in Europe reinforced the importance of the airlift capability that General Webster and most other Army Air Forces officials recognized during World War II. Airlift repeatedly demonstrated its flexibility as an instrument of United States foreign policy, short of actual combat operations. Since World War II airlift has responded in a myriad of ways and a variety of situations, but it first demonstrated its unique capabilities in helping to break the Berlin Blockade of 1948-1949.

ORIGINS OF A CRISIS

The Berlin Blockade arose from the unique situation in Europe at the end of World War II. The victorious Allies divided Germany into four zones, one each for France, Great Britain, the United States, and the Soviet Union. They also divided Berlin, Germany's capital and most important city, into four sectors, even though it lay well within the Soviet zone, see Figure 1.² While

¹Maj Gen Robert M. Webster, Comdr, MATS, to National War College Class, “Planning War Use of Air Transportation,” 10 Feb 47, United States Air Forces Historical Research Center, Maxwell AFB, AL.

²For a discussion of the establishment of these zones see: Stephen E. Ambrose, *Eisenhower and Berlin, 1945: The Decision to Halt at the Elbe* (New York: W. W. Norton & Co., 1967); W. Phillips Davison, *The Berlin Blockade: A Study in Cold War Politics* (Princeton, N. J.: Princeton University Press, 1958), 3-26; Avi Shlaim, *The United States and the Berlin Blockade, 1948-1949: A Study in Crisis Decision-Making* (Berkeley: University of California Press, 1983), 14-39; Earl F. Ziemke, *The U. S. Army and the Occupation of Germany, 1944-1946* (Washington, D. C.: Center of Military History, United States Army, 1975), 297-319.

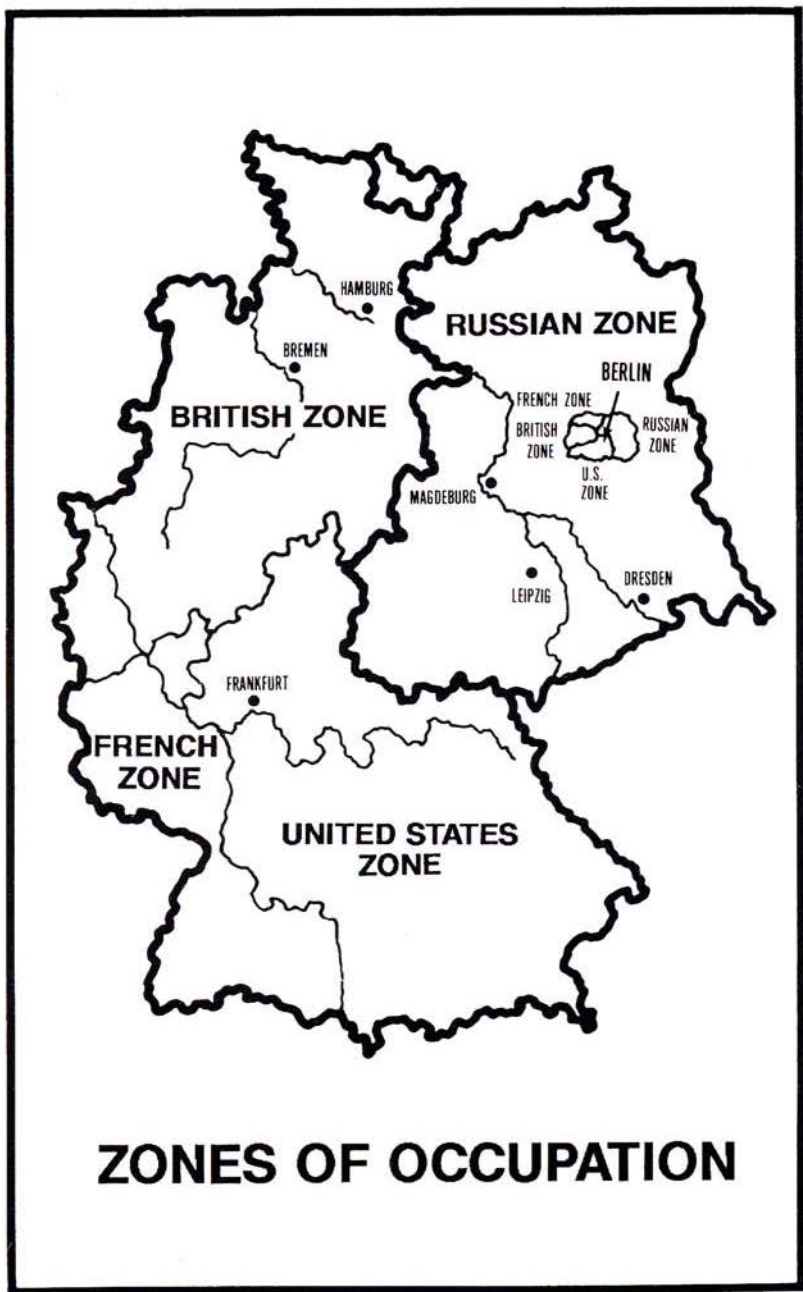


FIGURE 1

Map of Germany in 1945 reflecting the four zones of occupation. Note the location of Berlin.

this arrangement produced strained relations, during the immediate postwar years a spirit of cooperation lessened the difficulties. The Soviets never affirmed the western powers' right to access to Berlin, although the pact creating a divided city implied such right. Marshal Georgi K. Zhukov, Soviet commander in Germany, verbally promised American commander, General Lucius D. Clay, the use of a major highway and rail line into the city.³ While tempted to ask for the commitment in writing, Clay decided that such a request would imply limitations on American rights in Berlin and the western allies operated with only a verbal agreement until 1948.



General Lucius D. Clay, Military Governor of American Zone of Germany at the time of the Berlin Blockade.

³"Notes of Conference Between Marshal Zhukov. . . General Clay. . . , and General Weeks, 29 June 1945," in Department of State, *Foreign Relations of the United States (FRUS) 1945* (Washington: Government Printing Office, 1968), 3:358-59.

There was, however, a written guarantee of access to the city by air. On 30 November 1945, the Allied Control Council signed an agreement designed to improve air safety near the capital. The pact created a four-power Air Safety Center to control the airspace over the city; a "Berlin control zone, extending 20 miles in every direction from the center of the city, which, in effect, allowed air access to any part of the city although it might have been part of the Soviet sector"; and, more important, the Council reserved three 20-mile-wide air corridors in which the French, British, and Americans could fly between western Germany and Berlin, at any altitude below 10,000 feet without advance notice to the Russians.⁴

As Soviet-American relations deteriorated throughout 1946 and 1947, a few key American officials speculated that Germany's divided capital would be a point of confrontation. Robert Murphy of the State Department predicted in October 1947 that the Soviets would oppose any attempt by Britain, France, and the United States to consolidate their zones to form an independent German state. He surmised that the Russians would accuse the western allies⁵ of splitting Germany. Murphy noted, Berlin was "an island in the heart of the Soviet zone," and concluded that the Soviets would attempt to make the situation so unbearable that "we would eventually have to leave Berlin. But we have no intention of doing so."⁶

As tensions increased between the two superpowers, Murphy's bleak predictions proved correct. In early 1948, the Soviets began to exploit the vulnerability of the allies' position in Berlin by stopping coal deliveries to the western-controlled sections of the city.⁷ In March the Russians tried to cancel western air rights over Berlin, but backed down when the allies invoked the

⁴Lucius D. Clay, *Decision in Germany* (New York: Doubleday and Co., 1950), 115; Davison, *The Berlin Blockade*, 33-37. For the Allied Command Council papers of 30 November 1945 see *FRUS*, 1945, 3:1576-1606.

⁵Allies with a capital "A" is used to refer to all four major countries that combined forces to defeat the Axis powers in World War II; with a small "a", allies refers to the western powers cooperating in the late 1940s.

⁶Robert Murphy, "The Current Situation in Germany," lecture, Washington, D. C., October 1947, as quoted in Daniel Yergin, *Shattered Peace: The Origins of the Cold War and the National Security State* (Boston: Houghton Mifflin Co., 1977), 330.

⁷"The Berlin Airlift," in Frank N. Magill, ed., *Critical Events in American History* (Englewood Cliffs, NJ: Salem Press, 1975), 3:1794-79, and Jean Edward Smith, ed., *The Papers of General Lucius D. Clay, Germany, 1945-1949* (Bloomington: Indiana University Press, 1974), 2:597-98 and 600-677. The reasons for the American-Soviet tensions were complex and need not be detailed here.

1945 air agreement.⁸ A larger crisis arose in April over the questions of German currency reform and plans for an independent German state. After failing for months to reach an accord with the Soviet Union on stabilizing the German economy, the three western powers met to create a plan for their areas. On 20 March the Soviet representative to the Allied Control Council demanded information on these meetings. When the allies refused the demand, the Russian stormed from the Council meeting. General Clay realized, "I believe we have or are reaching a crisis in our relations." The Soviets expressed their dissatisfaction by restricting rail traffic into Berlin in a "mini-blockade."⁹ The western allies responded with what became known as the "little airlift."¹⁰ Local transport aircraft, mostly C-47s, carried enough supplies into Berlin to overcome the short-lived blockade.

Lieutenant General Curtis E. LeMay, Commander of United States Air Forces in Europe (USAFE), described the operation: "During one period of eleven days in early April, when the Soviets demanded the right to search and investigate all military shipments by rail, we flew small quantities of food and other critical supplies to Berlin; something like three hundred tons." By mid-April the Soviets had allowed surface transportation to resume.¹¹

A few days later Army Secretary Kenneth C. Royall outlined the American perception of the various actions in a letter to former Secretary of War Henry L. Stimson. Royall acknowledged that the attempt at "quadrupartite control of Germany" had failed and that the Soviets were trying to force the United States out of Berlin. He suggested that even though the Russians held "most of the trump cards in this situation since they control rail and road access to the city and certain of the most important public utilities such as electric power," the United States had "the capability of supplying ourselves by air and intend to do so whenever necessary." Royall had no specific plan to sustain a city of two million people by airlift, but he concluded, "We will hold out in

⁸Ltr, Ofc of Mil Govt, US, to Dept of Army and CSAF, n.s., 25 Mar 48. Unless otherwise noted, all sources cited in this study are contained in the Berlin Airlift Files, Office of MAC History, Scott AFB, IL.

⁹FRUS, 1948, 2:889 and 892-93.

¹⁰*Ibid.*, 2:71, 110, 218, and 281; Smith, ed., *Papers of General Lucius D. Clay*, 2:607 and 618-21.

¹¹Curtis E. LeMay with MacKinley Kantor, *Mission With LeMay* (Garden City, NY: Doubleday and Co., 1965), 415; msg, EUCOM/CC to OMGUS/CC, n. s., 4 Apr 48, as quoted in "USAFE and the Berlin Airlift, 1948," 2-4, details the airlift plan. In brief: Rhein-Main AB was the traffic control point; a maximum of 80 tons of government rations, fresh milk, fresh vegetables, and miscellaneous items would be delivered each day; and passenger traffic and mail was carried on a priority basis.

Berlin as long as it is feasible, that is, until the Soviets make life unbearable for even a small group."¹²

Quadrupartite control in Germany continued to deteriorate throughout the remainder of the spring of 1948. By June the United States, Great Britain, and France agreed on a five-point plan to create a West German republic and to revive the country's economy. First, a German assembly would meet to write a new constitution for a West German democracy. Second, the allies would integrate the new state into the economy of western Europe. Next, West Germany would include the industrially-rich Ruhr Valley. Then, the United States would maintain military forces in Germany indefinitely. Lastly, the western allies would cooperate closely and coordinate the economic policies of their respective sectors of Germany. Since they were excluded, the Soviets rejected the plan.

On 18 June the western powers initiated their plan and announced currency reforms in the western sectors of Germany, excluding Berlin. The Russians immediately accused the United States and its allies of dividing Germany and began harassing ground transportation going to the city. The Soviet Union also adopted a currency reform of its own and offered it in Berlin. Refusing to abdicate responsibility in Berlin, the allies indicated on June 23 that their money would also circulate there.¹³

The Soviets reacted promptly. The following day they cut off the supply of food and electricity to Berlin, making the excuse that it was the result of "technical difficulties." An inconspicuous article, dated 24 June 1948 and appearing in the local Soviet newspaper, stated that the "technical difficulties on the Berlin-Helmstadt railroad line . . . are much more serious than originally believed." The line would be closed indefinitely, causing "great apprehension about the food supply for the three western sectors of Berlin." Also, "severe shortages of electric current" forced the Soviets to limit electrical power to the western sectors to only two hours a day.¹⁴

From the Soviet perspective, the blockade of Berlin represented an opportunity to gain a valuable prize, the city itself, at very little risk. All the alternatives open to the western allies appeared inadequate. If they remained in Berlin they would be unable to supply their sectors of the city. If they tried to force a supply convoy through the Soviet occupation zone, war could result. The Russians did not believe the allies would risk war (a correct assumption as it turned out), and if they did world opinion would label them responsible

¹²Kenneth C. Royall, Secretary of the Army, to Henry L. Stimson, 21 April 1948, Henry L. Stimson Papers, Special Collections, Bienecke Library, Yale University, New Haven, CT.

¹³Yergin, *Shattered Peace*, 376-77.

¹⁴Quoted in Frank Howley, *Berlin Command* (New York: G. P. Putnam, 1950) 196-97. See also, *New York Times*, 25 June 1948, 1.

for a third world war. Moreover, Soviet officials believed that they had sufficient forces in the local area to quickly expel the allies from Germany if fighting began. Finally, the Russians, as well as many western observers, believed that air transport could not meet the needs of two million Berliners for 4,500 tons of coal and food every day. The Soviet Union concluded that the allies could never win this confrontation.¹⁵

General Clay and several other leaders immediately anticipated using aircraft to overcome an effort to blockade Berlin. Lieutenant General Albert C. Wedemeyer, Director of Plans and Operations for the Army, happened to be in London at the time. Recalling his own first-hand experience on the "Hump"¹⁶ during World War II, Wedemeyer knew the potential of airlift and believed that aircraft could sustain Berlin indefinitely.¹⁷ When the Russians



C-47s at Tempelhof. They bore the brunt of the early airlift, until the larger C-54s replaced them.

¹⁵Davison, *The Berlin Blockade*, 27-89, and Daniel F. Harrington, "The Berlin Blockade Revisited," *International History Review*, 6 (Feb 84), 88-112.

¹⁶When the Japanese cut land and sea routes into China, the U.S. Army Air Forces organized a massive airlift from India-to-China over the Himalayas and supplied American and Chinese Forces in China. For a discussion of this operation see, Roger D. Launius, "The Hump Airlift Operation of WWII," *Airlift: the Journal of the Airlift Operations School*, 7 (Fall 1985): 8-15, and Roger D. Launius, "Flying the Hump: America's First Military Airlift," *American Aviation Historical Society Journal*, 32 (Winter 1987): 278-83.

¹⁷Msg, Lt Gen A. C. Wedemeyer, Dir Plan & Ops, Dept Army, to Maj Gen T. R. Maddox, Plan & Ops, Dept Army, 28 Jun 48, Off Sec Air Stf, Msg Div TS Msgs, Box 2, ML1262.

slammed the doors to the city in June, Clay recommended implementing an airlift to supply key items until diplomats could resolve the crisis. The National Security Council approved Clay's suggestion, and the British quickly followed suit.¹⁸

ORGANIZING THE TASK FORCE

Anticipating the blockade, General Clay called Lieutenant General LeMay in Wiesbaden on 22 June 1948, and asked him to organize USAFE's fleet of C-47s into a massive airlift to resupply Berlin. Although Berlin had an estimated six-week supply of food, LeMay realized he had to move rapidly to organize the operation. He later recalled his conversation with Clay: "I had only been on the job six or seven months when there came that all-important telephone call from General Lucius D. Clay . . . [asking] could we haul some coal to Berlin?" LeMay replied, "Sure. We can haul anything. How much coal do you want us to haul?" Clay responded, "All you can haul."¹⁹ LeMay's orders simply stated, "Utilize the maximum number of airplanes to transport supplies to Tempelhof



Unloading flour at Tempelhof Airdrome in Berlin.

¹⁸*The Times* (London, England), 15 April 1956, and Howley, *Berlin Command*, 121.

¹⁹LeMay with Kantor, *Mission with LeMay*, 415.

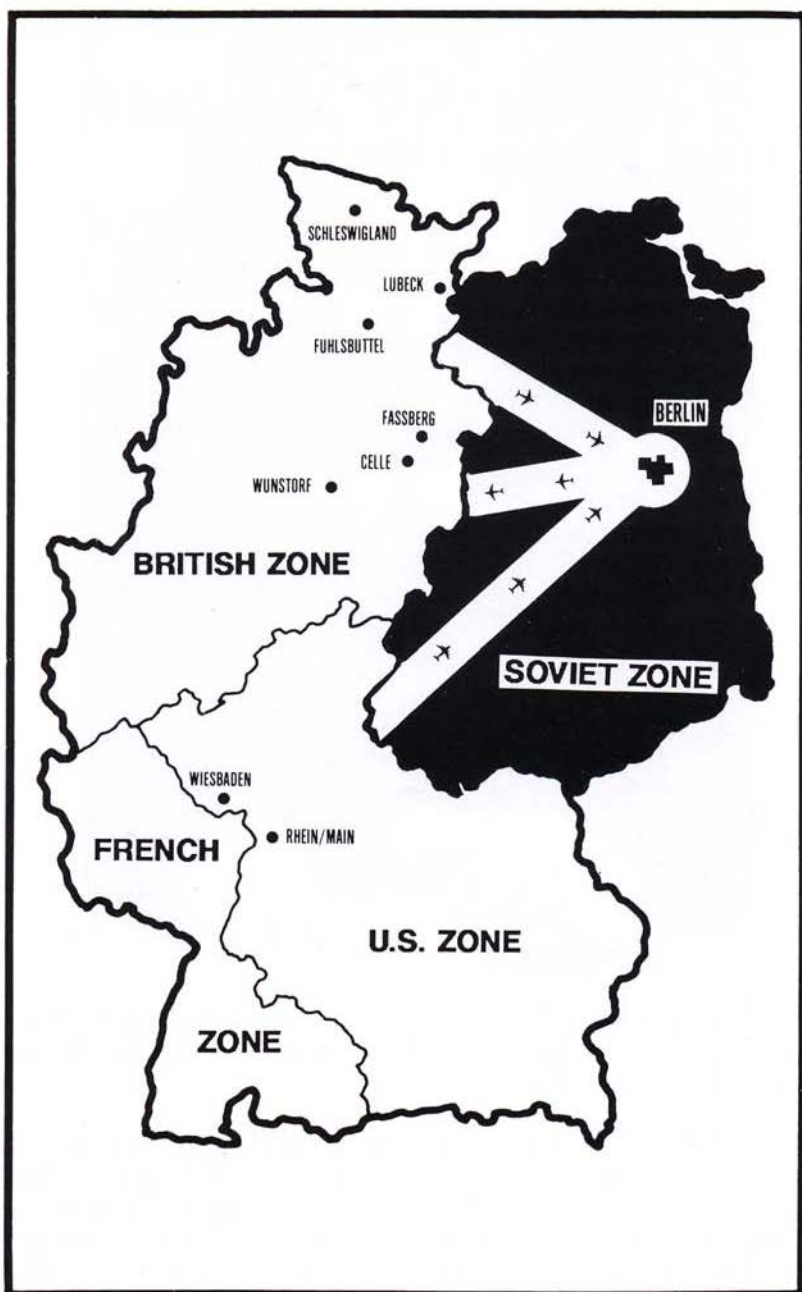


FIGURE 2

On 30 November 1945 the Allied Control Council, which included all four World War II Allies, signed an agreement that provided for three air corridors between the western zones and Berlin.



Brigadier General Joseph Smith, the first commander of the Berlin Airlift (pictured here as a Lieutenant General, Commander of the Military Air Transport Service, 1951-1958).

Air Drome, Berlin Strict adherence to existing air corridors will be maintained.”²⁰ These air corridors have been detailed in Figure 2. There was no comment on the nearly impossible hurdles inherent in the task.

Two days later General LeMay summoned Brigadier General Joseph Smith, Commander of the Wiesbaden Military Post, and appointed him Task Force Commander of an airlift operation expected to last about two weeks. For such a short operation, Smith gathered a minimal staff to direct the project. “When

²⁰EUCOM to USAFE, 22 June 1948 as quoted in “USAFE and the Berlin Airlift, 1948,” 9.

the airlift began, organization was makeshift, but enthusiastic . . . [P]ilots assigned to staff jobs at USAFE Headquarters, Weisbaden Military Post, European Air Transport Service, augmented the two troop carrier wings to provide around the clock flights."²¹

LeMay and Smith surveyed their resources and equipment. The 60th and 61st Troop Carrier Groups from Headquarters USAFE had 102 C-47s, which could carry about three tons each, and two of the newer C-54s, which had a capacity of ten tons. The British could also furnish some C-47s, which they called Dakotas, for "Operation VITTLES" as Smith designated the airlift, because "we're hauling grub." The British preferred "Operation Plane Fare," a pun that must have given airlifters around the world a chuckle.²² Smith's tiny staff at Task Force Headquarters worked feverishly to create a viable airlift structure that the existing aircraft and support could sustain for as much as 45 days.

On Saturday, 26 June 1948, two days following the Soviet announcement of the closure of the land routes to Berlin because of "technical difficulties," American crews flew the first missions airlifting 80 tons of milk, flour, medicine, and other high priority cargo to the city on 32 C-47 flights. By Monday the airlift was in full swing, however, General Clay was not optimistic. He predicted that with the equipment on hand, the airlift could do little more than meet the needs of the American and French presence in Berlin.²³ Clay estimated that 4,500 tons of supplies would have to be flown into the city every day to sustain its two million people.

Although General Smith commanded the Berlin Airlift Task Force for only a month, he made several decisions that were landmarks for airlift management. In doing so, he drew upon his experience as a pilot flying the mail for the Army Air Corps in 1934. Smith divided his headquarters into two main sections: Operations, and Supply and Maintenance, and relied on Headquarters USAFE for all other support. His staff assembled at Wiesbaden all the C-47s available in USAFE and arranged aircraft and crew support. Smith also set up a duty and maintenance schedule reminiscent of his air mail days. His goal was to fly 65 percent of the aircraft every day. This would allow the maintenance and operations personnel to properly manage and maintain the fleet.²⁴

²¹D. M. Giangreco and Robert E. Griffin, *Airbridge to Berlin* (Novato, CA: Presidio Press, 1988), 99.

²²William H. Tunner, *Over The Hump* (New York: Duell & Sloan, 1964), 159.

²³Smith, ed., *The Papers of General Lucius D. Clay*, 2:701-02, and Howley, *Berlin Command*, 131-32.

²⁴"Log of Operation Vittles," 30 Jul 48, 2, as cited in "USAFE and the Berlin Airlift, 1948," 13, and ltr, Lt Gen Joseph Smith, USAF (Ret) to R. D. Launius, n.s., 14 May 1988, copy in possession of the author.

General Smith realized that he needed an accurate accounting of the aircraft available for the airlift, their capacity, the type of cargo they would be carrying, and the capability of facilities at each end of the flights to support the airlift. He discovered that each aircraft in commission would have to complete three round trips a day to haul the minimum amount of supplies that General Clay estimated would be required for allied occupation personnel. Smith and his staff developed an elaborate schedule to accomplish this task. They established a pattern of one-way operations through the three corridors, with aircraft flow set at five different altitudes. The first plane flew at 5,000 feet and each succeeding aircraft departed three minutes later and was 500 feet higher, up to 7,000 feet. The pattern then repeated; therefore, all transports at the same altitude were 15 minutes apart. Later the Task Force reduced the flight levels to three for the sake of simplicity; however, the frequency remained the same with the intervals at the same altitude reduced to nine minutes. The airplanes at all levels then converged on Berlin at a rate of one every three minutes. This optimum working rhythm required that the takeoff and landing times of all aircraft be precise.

The operating units in those early days of the airlift were: the 60th Troop Carrier Group, under Colonel Bertram C. Harrison, with C-47s at Wiesbaden AB; the 61st Troop Carrier Group, under Colonel Walter S. Lee, with C-47s

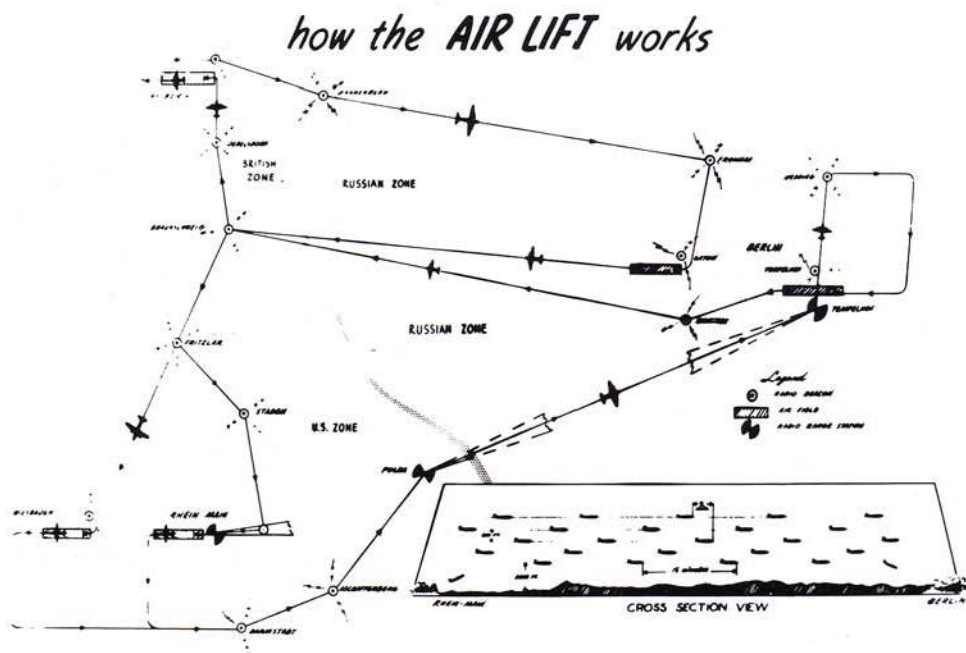


Diagram explaining the airlift flow. Note the illustration in the lower right that explains the altitude and time spacing of the aircraft, also the one-way flow of aircraft through the air corridors.

at Rhein-Main AB; and a provisional C-54 Troop Carrier Group at Rhein-Main, under Colonel G. R. Birchard, made up of aircraft from other theaters. All of these units flew from their home bases to Berlin's Tempelhof Airport.²⁵ General Smith compensated for the difference in aircraft speed by establishing a "block system" of dispatching C-54s and C-47s in groups at specific times so that like aircraft with the same cruising speeds could travel together. This insured orderly take-offs and landings and the utilization of the maximum number of aircraft.²⁶ The C-54s, with their greater carrying capacity, took precedence over other aircraft, and a small group of C-47s at Rhein-Main acted as a buffer group to fill in any gaps in the schedule.²⁷

On 20 July General Smith designated the Frankfurt Air Traffic Control Center one of the major sections of Berlin Airlift Task Force Headquarters, along with Operations, Personnel, Supply and Maintenance, and the USAFE Liaison. The Control Center, with USAF Captains Campbell B. McCullough and Russell Powell as liaison officers, scheduled and controlled all Operation VITTLES' airlift flights.²⁸

During General Smith's short tenure as Task Force commander, he established the basic approach for the airlift and made a series of decisions that were critical to the operation's success. His successor continued to use

²⁵"Berlin Airlift Task Force Organization Chart," 1 Jul 48, 20 Jul 48.

²⁶General Smith announced the following schedule on 12 July 1948:

<u>Rhein-Main</u>	
<u>C-54s</u>	<u>C-47s</u>
1920-2140 L	2140-2300 L
0320-0540 L	0540-0700 L
1100-1340 L	1340-1500 L
<u>Wiesbaden</u>	
<u>C-47s</u>	
2300-0256 L	
0700-1056 L	
1500-1856 L	

²⁷Quoted in "USAFE and the Berlin Airlift, 1948," 15-16. An exception to the rule allowed passenger C-47s to follow the C-54s during extreme weather.

²⁸Intvw, Capt C. L. Reynolds and Dr. W. F. Sprague with Capt Campbell B. McCullough and Capt Russell Powell, Frankfurt, Germany, 14 Jul 48, as cited in "USAFE and the Berlin Airlift, 1948," 34-35.

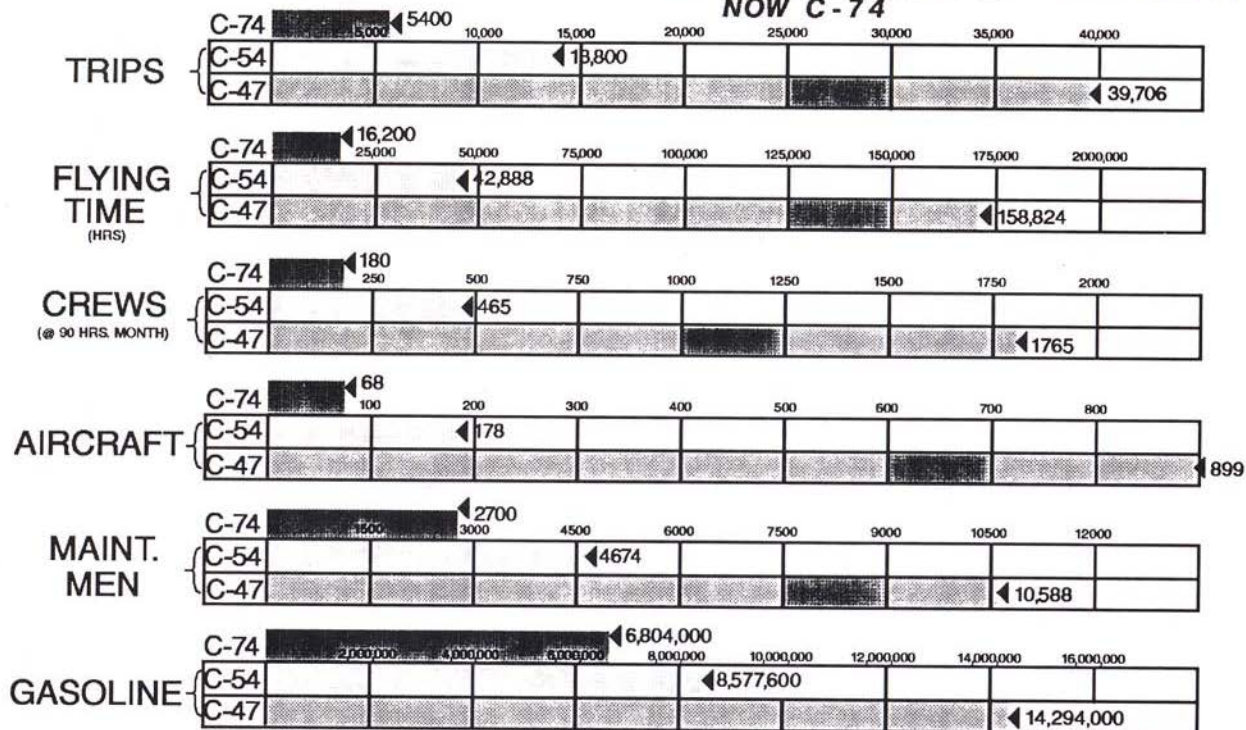


The large hangars at Tempelhof Airdrome in Berlin enabled Airlift aircraft to taxi directly underneath the buildings to discharge passengers and cargo.

COMPARISONS. . .

4500 TONS DAILY (FOR 30 DAYS)
C-47 AND C-54 FOR AIRLIFT TO
NOW C-74

BERLIN. .



*FACTORS: 3.4 TONS FOR 4 HR. ROUND TRIP BY C-47. *C-74: 25 TONS FOR 3.0 HRS ROUND TRIP
9.7 TONS FOR 3.3 HR. ROUND TRIP BY C-54.

An example of the type of charts used by General Smith and his successors to organize the airlift. This graph compares flying time, trips, crews, aircraft, maintenance men, and fuel by C-47, C-54, and C-74 aircraft.

Smith's airlift flow patterns, the "block system," and his general schedule of maintenance and flying hours.²⁹

SECOND THOUGHTS

Although everyone recognized that the Task Force was doing an exceptional job under difficult circumstances during the summer of 1948, few people believed that the effort could continue indefinitely. Such a large-scale airlift was unprecedented, and the Task Force had been hastily organized. General Clay did not believe the airlift could be sustained through the winter and recommended using an armored column to break through to Berlin. This suggestion received mixed reviews in Washington, probably because of the plan's inherent danger of provoking war with the Soviets.³⁰ Undersecretary of State Robert A. Lovett noted that President Harry S. Truman was more hopeful and determined to take any action short of war, including an airlift, to hold Berlin. Lovett commented, "We decided to stand firm in Berlin and not be thrown out, confident that we could do the job ultimately by the same techniques that we used in lifting approximately 10,000 tons in one month over the hump from India to China at very high altitudes".³¹

With the airlift less than a month old, the National Security Council (NSC) in Washington investigated ways to improve the operation. At the time, Americans were moving about 1,000 tons per day and the British about 750 tons more. The NSC speculated that by using a greater number of larger aircraft the Americans could increase their delivery to 3,000 tons a day, and the British to 1,000 tons. Although this nearly matched the estimated 4,500 tons needed to sustain Berlin, the experts agreed that this rate could not be maintained for long.

To achieve the increased rate of delivery, the NSC recommended creating an expanded organization that could manage the airlift and squeeze the maximum capacity out of resources. "To do this we must find new airdromes and ship one or two repair depots. The airdrome situation is critical since Tempelhof is breaking up under its present load." The repair depots would improve aircraft maintenance. "The maintenance of the present 53 C-54's and 105 C-47's is deteriorating rapidly since we have no facilities there to support proper maintenance." The Council noted that to get the additional resources

²⁹Gen Smith attained the rank of Lieutenant General and served as commander of the Military Air Transport Service (MATS) from 15 November 1951 until 30 June 1958, the longest tenure of any MATS commander.

³⁰*FRUS*, 1948, 2:604-607.

³¹Walter Millis, ed., *The Forrestal Diaries* (New York: Viking Press, 1951), 452-55, and 81st Cong., 1st Session, *Investigation of the B-36 Bombing Program*, 32-33.

needed to increase the capacity of the airlift would "involve our entire transport reserve and will require the dispatch of a great many troops. We will then have everything over there and it would be a serious question as to how many would be caught on the ground and destroyed, if hostilities broke out." The stripping of those transports would also rob other theaters of peacetime airlift support. Finally, the problems of flying during the harsh European winter seemed insurmountable to the NSC representatives. Lovett noted, it was "obvious that the Soviets know that flying weather will be too bad for this operation to continue beyond October. . . . [W]e should clearly recognize that the airlift is a temporary expedient."³²

When the NSC met again the following week, General Hoyt S. Vandenberg, Air Force Chief of Staff, criticized any "piecemeal approach" to supplying Berlin. He said that a concerted effort "would require most of the remaining facilities of MATS." Vandenberg concluded, "If we decide that this operation is going on for some time, the Air Force would prefer that we go in wholeheartedly. If we do, Berlin can be supplied." The NSC agreed and recommended to President Truman that the airlift be supported "wholeheartedly."³³

However, the presidential advisors, regardless of the improved efficiency of the airlift, agreed with General Clay that it was only a stopgap measure. They considered the longterm options to be withdrawal from Berlin, direct action that might provoke war, or a negotiated settlement. The airlift could provide the essentials to the city, allow the United States to take an "unprovocative but firm stand," and give the diplomats time to resolve the crisis peacefully.³⁴ But, most experts, including Lovett and Secretary of Defense James V. Forrestal, agreed that the negotiators had to reach a solution by mid-October, when the German winter began, or the United States would have to withdraw or risk war to resupply the city by surface carrier.³⁵ Forrestal directed that the military make a maximum effort to sustain the airlift until diplomats could reach an agreement to lift the blockade.³⁶

³²Memo for the President, 16 Jul 48, "Memo for President: Meeting Discussions (1948)" Folder, Box 220, President's Secretary's Files, Harry S. Truman Papers, Harry S. Truman Presidential Library, Independence, MO.

³³"Memorandum for the President," 23 Jul 48, *Ibid.*

³⁴"State-National Defense Meeting of June 27 Held for the Purpose of Determining the U. S. Position Regarding the Continued Occupation of Berlin," 27 Jun 48, P & O 092 TS "Hot File," Record Group (RG) 319, National Archives and Records Administration (NARA), Washington DC; *FRUS*, 1948, 2:930-31.

³⁵Harrington, "The Berlin Blockade Revisited," 99.

³⁶SECDEF to NSC, "US Military Courses of Action with Respect to the Situation in Berlin," 26 Jul 48.

TRANSFERRING AIRCRAFT TO THE AIRLIFT TASK FORCE

To achieve greater airlift capability, in July 1948 Lieutenant General LeMay sent a personal message to Lieutenant General Lauris Norstad, Headquarters USAF, Deputy Chief of Staff (DCS) Operations, suggesting that about 30 C-54s with two crews each be sent to Germany to participate in the airlift. LeMay would provide all support locally. He further recommended "that serious study be given to the possible conversion [to C-54s] of the two troop carrier groups in my command at earlier dates than" previously planned.³⁷ The Air Force Chief of Staff responded immediately and ordered 39 C-54s from the



Unloading coal from C-54s in Berlin. Berliners even swept the coal dust and residue into neat piles, saving every scrap of fuel for use in the city.

³⁷Msg, USAFE/CC to USAF/DO, n. s., 28 Jun 48, as quoted in "USAFE and the Berlin Airlift, 1948," 11.

Alaskan, Caribbean, and Tactical Air Commands to transfer to Germany, where they would be under General LeMay's operational control. In all, three squadrons of aircraft and 825 aircrew and support personnel joined the Task Force.³⁸ Another squadron of 13 C-54s and 425 people from Hickam AFB, Hawaii, soon followed. More C-54s came later.

Even though the Military Air Transport Service (MATs) was only a few weeks old when the blockade began, the command operated most of the Air Force's transport aircraft, and was therefore an integral part of the airlift from the beginning. On 27 June 1948 MATs ordered four squadrons of C-54s to join those from the Atlantic Division already in the Airlift Task Force.³⁹ The command also contracted with Pan American, American Overseas, Seaboard and Western, and Alaskan airlines to transport 62 tons of aircraft parts across the Atlantic to support Operation VITTLES.⁴⁰ By 20 July the Air Force had 54 C-54s and 105 C-47s and the British had 40 Yorks and 50 C-47s engaged in the airlift; however, this was still obviously inadequate.⁴¹ Between June and December 1948 MATs conducted eight major movements, code-named ABLE through HOW, of airplanes, personnel, and equipment to Germany to support the airlift (see Table 1 for summary).

³⁸*Ibid.*

³⁹Hist of MATs, 1948, 153-54.

⁴⁰*Ibid.*, 53.

⁴¹*The New York Times*, 5 Jul 48, 1 and 8 Jul 48, 1 and 7; and Hist of MATs, 1948, 153-154.

TABLE 1**C-54 TRANSFERS TO BERLIN AIRLIFT TASK FORCE**

<u>Code Name</u>	<u>No. of acft</u>	<u>From</u>	<u>Dates of Movement</u>
Able	45	Alaskan Air Command Troop Carrier Command	28 Jun-11 Jul 48
Baker	9	MATS, Continental Div	10 Jul-13 Jul 48
Charlie	72	MATS, 8 Sqs. Atlantic Div 2 Sqs. Pacific Div 4 Sqs. Continental Div 2 Sqs.	23 Jul-16 Aug 48
Dog	36	FEAF	10 Sep-10 Oct 48
Easy	24	MATS, 2 Naval Sqs	27 Oct-11 Nov 48
Fox	10	MATS, AWS Pacific Div	9 Nov-16 Dec 48
George	20	MATS, AMS, TAC, Continental Air Com.	12 Nov 48-12 Jan 49
How	24	MATS, AACS	17 Nov 48-10 Jan 49
Total	<u>240</u>		

SOURCE: Berlin Airlift Files, Ofc of MAC Hist.

Before 1 July the NSC discussed MATS' assuming responsibility for the Berlin Airlift, and USAF Headquarters requested the command to develop a plan for augmenting the operation.⁴² On 2 July MATS presented a plan for Operation MANNA, based on the assumption that the command's European Wing would take over jurisdiction for the operation and that all participating personnel and aircraft would be pooled with the C-54s based at Wiesbaden and Rhein-Main and the C-47s stationed at Eschborn Field, near Frankfurt. Operation MANNA offered three alternatives. The first approach called for MATS to contribute 50 C-54s and Troop Carrier Command 44 to the airlift. With these C-54s and an additional 70 C-47s flying eight hours a day the operation could transport 1,886 tons per day. Under the second alternative, MATS would have contributed 25 C-54s; those airplanes and those in the theater could haul daily 1,409 tons. The last suggested that 80 C-54s from



Major General Laurence S. Kuter commanded MATS during the Berlin Airlift (pictured here as a General).

⁴²MATS Weekly Diary, AT, 30 Jun and 1 Jul 48.

MATS and 44 C-54s from Troop Carrier Command, with no C-47s, be sent to Europe and move 2,000 tons per day to Berlin.⁴³

On the day Operation MANNA was drafted, Major General Laurence S. Kuter, MATS Commander, alerted his Atlantic, Pacific, and Continental Divisions that 50 C-54s with crews and support personnel might be moved to Germany within four days.⁴⁴ This was the first indication that MATS might actively participate in Operation VITTLES. Administrative staffs worked throughout the Fourth of July weekend selecting, processing, and readying crews, and maintenance personnel spent the weekend preparing their aircraft for the move.⁴⁵

Headquarters USAF, however, disapproved the plan, probably because none of its options met the 4,500-ton-per-day minimum delivery rate, and directed MATS to transfer nine C-54s, aircrews, and support personnel to the Berlin Airlift Task Force. General Kuter ordered the units at Fairfield-Suisun AFB, California, Great Falls AFB, Montana, and Brookley AFB, Alabama, to each send three C-54s to MATS' Headquarters Atlantic Division at Westover AFB, Massachusetts, and furnish each aircraft with a crew of three "first" pilots, three co-pilots, one navigator, three engineers, one radio operator, two crew chiefs, and seven mechanics with hand tools and mechanic kits. The Atlantic Division would then organize the group into a provisional transport squadron, under the command of Lieutenant Colonel James R. Haun, and move the squadron to Germany. Upon arrival in Germany, the squadron would be under the jurisdiction and control of USAFE.⁴⁶ The nine C-54s began taking off from their home stations on 10 July and all reached Germany by 13 July.⁴⁷

Even with the additional MATS aircraft, it was apparent that the Task Force could not supply Berlin's minimum of food and supplies. The airlift needed at least twice as many C-54s and a much larger support structure, and there were indications that MATS would be made responsible for the enlarged project.⁴⁸ (See Table 2 for a depiction of the total aircraft assigned to the airlift.)

⁴³Plan, MATS/XP, "Operation Manna," 2 Jul 48.

⁴⁴Msg, MATS EN809 to ATLD/CC, *et al.*, n.s., 2 Jul 48.

⁴⁵Manuscript Rprt, 520th Air Transport Wing, Westover AFB MA, "Project Vittles," 1, and ms rprt, 521st Air Transport Group, Brookley AFB AL, "Participation in Vittles Project," 1.

⁴⁶MATS/AT, Weekly Diary, 14 Jul 48; msg, MATS EN-847 to Comdr 517th ATW/CC, *et al.*, n.s., 10 Jul 48; and msg, MATS EN-848 to ATLD/CC, n.s., 10 Jul 48.

⁴⁷Ms rprt, 521st ATG, "Participation in Vittles Project," 2; and MATS EN-857 to 521st ATG, Brookley AFB AL, *et al.*, n.s., 14 Jul 48.

⁴⁸Mins, MATS/P&O, "Staff Meeting," 12 Jul 48; and msg, USAF/AFOPL 50346 to SAC/CC, *et al.*, n.s., 24 Jul 48.

TABLE 2

AMERICAN AIRCRAFT FLYING THE BERLIN AIRLIFT*

<u>Number</u>	<u>Type</u>	<u>Date</u>
102	C-47	1 Jul 48
2	C-54	
108	C-47	15 Jul 48
51	C-54	
81	C-47	5 Aug 48
88	C-54	
80	C-47	19 Aug 48
110	C-54	
58	C-47	16 Sep 48
116	C-54	
5	C-82	
0	C-47	1 Oct 48
126	C-54	
5	C-82	
182	C-54	17 Nov 48
24	R-5D (Navy variant of C-54)	
0	C-82	
225	C-54	15 Jan 49
24	R-5D (Navy variant of C-54)	
221	C-54	1 Aug 49
24	R-5D (Navy variant of C-54)	
101	C-54	21 Sept 49
0	R-5D (Navy variant of C-54)	
53	C-54	14 Oct 49
41	C-54	4 Nov 49

* Does not include support, depot, or pipeline aircraft.

SOURCE: "Berlin Airlift: A USAFE Summary," n.d., 11.

On 23 July Headquarters USAF directed MATS to provide the airlift with eight C-54 squadrons. The Atlantic Division furnished two, the Continental Division two, and the Pacific Division four. As in previous large-scale movements, these aircraft departed as individual planes spaced at suitable intervals to facilitate handling en route at support bases. This movement, code-named "Charlie," ferried 72 C-54s, some travelling over 15,000 miles, and required only 24 days from alert to arrival, only 20 days from take-off of the first airplane until the landing of the last.

Even before "Charlie" increased the Task Force C-54 fleet to 126, Headquarters USAFE planned for further expansion to 225 C-54s to be stationed at Rhein-Main, Wiesbaden, and Fassberg (if the British concurred), and landing at Tempelhof and the British airfield at Gatow in Berlin. Airlift Task Force leaders believed a fleet of that size would saturate the available facilities and they planned no more increases until they could enlarge the support facilities.

Washington approved the increase to 225 aircraft and requested MATS to add 126 C-54s, including cargo aircraft assigned to Naval Squadrons, to those the command had already furnished the airlift.⁴⁹ Other USAF sources supplied the remaining airframes and crews. As movement "Charlie" neared completion, the MATS staff studied the new requirement and decided they could meet the increase by utilizing all MATS cargo-configured C-54s, except for 13 assigned to other services, and include no passenger-type aircraft.⁵⁰

However, before Headquarters USAF sent the new request, it asked MATS to make a more indirect contribution to the airlift. At that time the VITTLES fleet contained 125 operational planes, but some of them were due to return to civilian contractors' factories for reconditioning. Headquarters USAF's immediate objective was to sustain the Task Force fleet at 125 operational C-54s, excluding those in 200-hour maintenance, with a gradual build-up to 225 C-54s altogether. MATS estimated that maintaining an operational fleet of 125 airplanes would require 48 to 58 additional aircraft—approximately 38 would be at the contractors and 10 to 20 would be in the maintenance pipeline.⁵¹ Accordingly, the Air Staff recommended that 38 C-54s be designated for the pipeline: 24 to be loaned by Tactical Air Command;⁵² two from MATS; and 12

⁴⁹Ltr, Maj Gen L.S. Kuter, MATS/CC, to Maj Gen W.H. Tunner, ALTF/CC, n.s., 13 Aug 48.

⁵⁰Rprt, MATS/CCE, "Minutes of MATS Daily Conference," 11 Aug 48.

⁵¹Ltr, Maj Gen L.S. Kuter, MATS/CC, to Maj Gen W.H. Tunner, ALTF/CC, n.s., 2 Sep 48.

⁵²This was, in effect, a restoration of a cut in MATS aircraft made earlier in the year. However, identifying them as loaned aircraft indicated the transfer would be temporary.

from miscellaneous Air Force sources.⁵³ General Kuter informed USAF that he considered further cuts in the MATS fleet inadvisable and asked that the aircraft come from the Far East Air Force (FEAF) instead.⁵⁴

Beginning in September, at Kuter's request, Headquarters USAF created a project to transfer C-54 aircraft from other commands to MATS for the support of VITTLES.⁵⁵ The Far East Air Force received orders to furnish 36 C-54s from the 317th Troop Carrier Group to Rhein-Main for assignment to the Task Force.⁵⁶ Headquarters MATS controlled the movement of the aircraft and the 150 officers and 459 airmen of the 317th which accompanied it.⁵⁷ The movement (Dog) began immediately and by 5 October, 21 of the C-54s were in Germany. The rest arrived a few days later, bringing the total Task Force fleet up to 162 C-54s, including those in maintenance and in the pipeline.

As mentioned earlier, the 225 aircraft plan contemplated the use of naval aircraft and this effort began in August 1948.⁵⁸ General Kuter supported the naval participation;⁵⁹ however, General LeMay opposed it, contending that the inclusion of flying units from another service could disrupt the smooth air traffic control and present problems in logistical support.⁶⁰ The USAF headquarters resolved the disagreement at a conference on 24 and 25 September when the Joint Chiefs of Staff directed the Navy to participate directly in the Berlin Airlift.⁶¹

On 22 October General Kuter informed Rear Admiral Daniel W. Tomlinson, MATS' Pacific Division Commander, that the JCS had officially requested the Secretary of the Navy to furnish aircraft and personnel for the Task Force. On 27 October the MATS commander, with the concurrence of the Chief of Naval Operations, officially ordered the R-5D aircraft, the naval variant of the C-54, from the VR-6 and VR-8 squadrons of Tomlinson's command to move from

⁵³Mins, MATS Daily Conference, 26 Aug 48.

⁵⁴Mins, MATS/AT, "Staff Conference," 30 Aug 48 and 31 Aug 48.

⁵⁵Rprt, MATS/P&O, "Weekly Diary, Plans & Operations," 29 Sep 48.

⁵⁶Msg, USAF to FEAF, *et al.*, n.s., 10 Sep 48.

⁵⁷Rprt, MATS/AT, "Weekly Diary," 14 Sep 48.

⁵⁸Mins, MATS/AT, "Staff Conference," 20 Aug 48.

⁵⁹Ltr, Maj Gen L.S. Kuter, MATS/CC, to Maj Gen W.H. Tunner, ALTF/CC, n.s., 16 Sep 48.

⁶⁰Msg, USAFE EAFDD UX77023 to USAF, n.s., 27 Sep 48.

⁶¹Memo for record, MATS/AT, "Replacement Training Unit," 25 Sep 48.

the Pacific to Germany.⁶² The target date for these units to be in Germany was 15 November 1948. The two squadrons' commanders departed Westover at 1628Z, 8 November, on an aircraft flown up from Jacksonville the previous day.⁶³ The rest of their aircraft followed promptly. By 11 November the Navy R-5Ds merged into the 61st Troop Carrier Group and the 1422d Provisional Group and were flying missions from Rhein-Main.⁶⁴

As a response to USAF's firm commitment for a final number of 225 operational C-54s in the Berlin Airlift, there were three more transport aircraft movements to Germany before the end of 1948. By 17 November 1948, USAF had authorized 182 operational C-54s, with a support pool of 62 aircraft, and 24 Navy R-5Ds and their support pool for Operation VITTLES. During the block aircraft movements, MATS transferred 138 C-54s to the Berlin Airlift and other Air Force organizations contributed 95. Nine of this latter 95 C-54s went to Kelly AFB, Texas, as pipeline aircraft.⁶⁵ During the last three months of the year, the pipeline supplied replacement aircraft, in an almost constant flow, for those worn out or accidentally destroyed in Operation VITTLES.⁶⁶

While the later block movements proceeded slowly, in general the speed of the air transport deployment to Germany over MATS routes from Guam to Alaska impressively demonstrated air mobility. It proved beyond doubt MATS' value as an air transportation agency which could not only furnish fully operational planes and skilled personnel in an emergency, but also could move them anywhere air transport was desired. In spite of the remarkable speed of the redeployment, not one of the 240 augmentation aircraft flown to Germany was lost by accident en route.

MATS TAKES A MORE ACTIVE ROLE

From the beginning of the Berlin Airlift MATS Headquarters believed that the operation was properly a MATS function. The command incorrectly assumed in planning Operation MANNA that the European Wing of the Atlantic Division would control the project. Command leaders considered the

⁶²Msg, MATS/27K-1 to PACD/CC, *et al.*, n.s., 27 Oct 48. The movement's code-name was Easy.

⁶³Msg, 1600 ATW/WTX-OBO-159 to USAFE, n.s., 8 Nov 48.

⁶⁴MATS Compt, "Operation Vittles: Report of Operations and Cost Estimates," 11 Nov 48.

⁶⁵Able-0 (45 TC); Baker-nine; Charlie-72; Dog-0 (36 FEAF); Easy-24 (Naval MATS); Fox-10; George-five (AMC-4, CAirC-nine, TAC-one); How-18.

⁶⁶Pipeline aircraft were replacements; block movement aircraft increased the size of the Task Force fleet.

airlift a clear-cut opportunity for air transport to show what it could do and, to its members, MATS, organized specifically to sustain heavy airlift, seemed the logical agency for the job.⁶⁷

Major General William H. Tunner, MATS Deputy Commander for Operations and architect of the World War II "Hump" airlift, was the most vocal advocate of MATS involvement. "I could tell from the reports coming in, that the operation of the airlift could stand improvement," he recalled. None of the people involved, he thought, had sufficient breadth of vision or depth of understanding to wring the full potential from their resources. Tunner

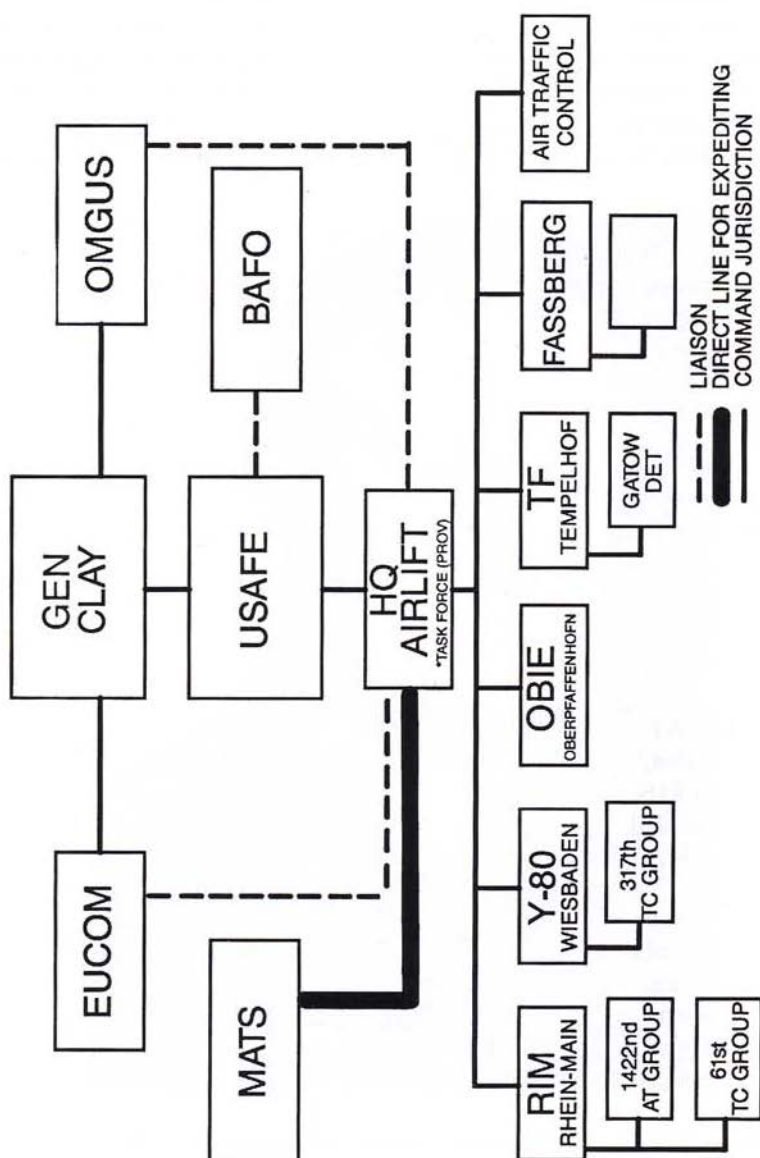


Major General William H. Tunner, MATS Deputy Commander for Operations, became the Berlin Airlift Commander in July 1948 (pictured here as a Lieutenant General, Commander of MATS 1958-1960).

⁶⁷Memo, Maj Gen W.H. Tunner, MATS/DC to Maj Gen L.S. Kuter, MATS/CC, "Berlin Airlift," 6 Jul 48.

ORGANIZATIONAL CHART

AIRLIFT
TASK FORCE (PROV.)



9A000808-031

This organizational chart shows the structure of the Provisional Airlift Task Force under USAFE that Tunner commanded upon his arrival in Germany. In October 1948 this headquarters incorporated the British airlift structure in a Combined Airlift Task Force, still under USAFE.

believed that Operation VITTLES needed a proven strategic airlifter as centralized manager. Of course, most of the really experienced airlift managers were assigned to MATS. Immediately after the airlift began, Tunner marched into General Kuter's office at MATS headquarters and told his commander that MATS should take over Operation VITTLES and he would be happy to command it. Kuter, certainly more politically astute than the brilliant but volatile Tunner, responded, "That's not the way to do it, Bill . . . Let's just sit tight and see what happens."⁶⁸

The MATS leadership did not have to wait long. About a month after the airlift began, General Vandenberg realized the operation could last for a long time and placed it in the hands of MATS. He directed on 23 July that MATS establish a Task Force headquarters group and move eight C-54 squadrons of 72 planes and support personnel at Wiesbaden. This required MATS to transfer 682 officers, 1,818 airmen, and 20 civilians to Germany.⁶⁹ Minor changes later altered the number of personnel involved.⁷⁰

On 27 July General Tunner left Westover with nine officers and two airmen, the advanced echelon of his staff, to assume his new position as provisional Task Force commander.⁷¹ The next day 13 more officers and five airmen followed, accompanied by several civilians.⁷² The little group established the organization of the Berlin Airlift Task Force (Provisional) at Number 11 Tannus Strasse, Wiesbaden, effective 1 August 1948.⁷³ Tunner's letter of appointment also mandated his personal direction of the airlift personnel and equipment at

⁶⁸Tunner, *Over the Hump*, 159-160.

⁶⁹Msg, USAF/AFOPO 50338 to MATS/CC, "Augmentation of Present Operation Vittles," 23 Jul 48; ltr, MATS/AG to ATLD/CC, *et al.*, "Movement Directive Hqs 518th Air Transport Group and Various MATS Air Transport Squadrons," 25 Jul 48; msg, MATS EN-960 to USAFE/CC, 25 Jul 48, as cited in History of MATS, 1948, 164.

⁷⁰The Headquarters and Headquarters Squadron, 518th Air Transport Group, with 16 officers and 31 airmen, was deleted; the personnel of the 1st and 3rd Air Transport Squadrons were increased to 135, including traffic people qualified in ramp cargo and tie-down procedures; 40 officers were added to the 23d and 22d squadrons from Fairfield, and Pacific Division had to furnish three officers to Headquarters, 1422 Air Transport Group (Provisional).

⁷¹Msg, MATS/EN-960 to USAFE/CC, n.s., 25 Jul 48. The staff members were from the 501st Air Force Base Unit.

⁷²MATS Orders-21, "Temporary Duty", 26 Jul 48.

⁷³Ms, Mrs Patty Dudley, "Memoir of Operations Vittles," Jun 49, quoted in Hist of MATS, 1948, 166.

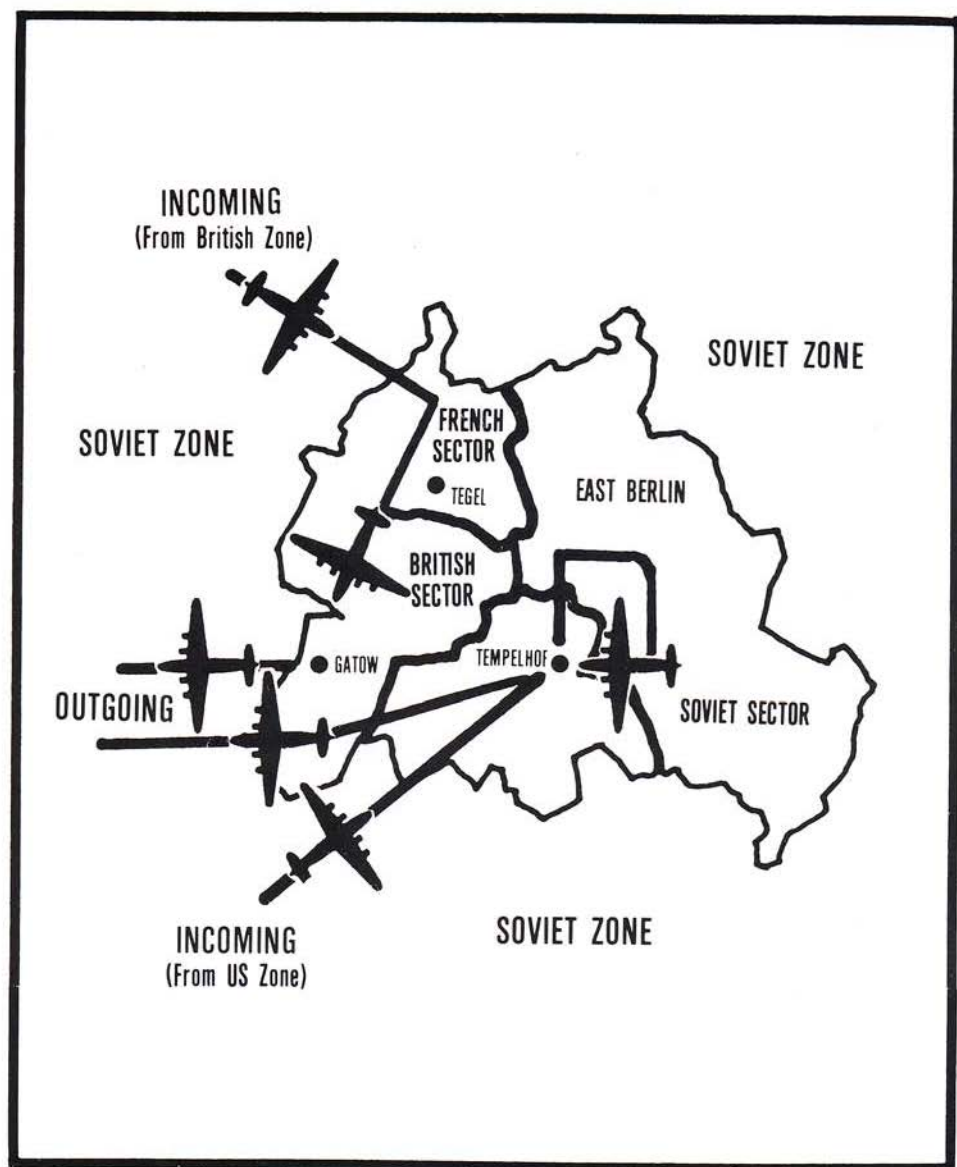


FIGURE 3

Airspace over Berlin. Note close proximity of Soviet airfields to western air corridors. Incoming flights used the northern and southern corridors, outgoing flights the center corridor.

the bases that General Smith had established: Rhein-Main, Wiesbaden, and Tempelhof. The letter told him to assume control of the maintenance depot at Oberpfaffenhofen (and any other maintenance depots he needed), the Frankfurt Air Traffic Control Center (and any other such center that could facilitate his mission), and all aircraft operations in the air corridor between Berlin and Frankfurt.⁷⁴ Tunner's forces expanded as the Task Force continued to grow during the fall of 1948.

Although the USAF directive establishing the Provisional Task Force specifically gave the Commanding General, USAFE, responsibility for overall management, the short message left latitude for some interpretation. The rank and file of the MATS headquarters at Wiesbaden, at least, expected to operate basically independently of USAFE. A civilian on the headquarters staff recounted the feeling in MATS as of 2 August 1948: "Up to this point everyone had considered the operation was to be a MATS project under our own name, but after a visit to USAFE Headquarters we were quickly informed that the project was a USAFE operation, and" she continued, "while General Tunner had operational control, MATS was merely acting as the source of supply and all administration would be through USAFE channels." She recalled the reaction: "This came as a shock to all concerned and we found that our communications with MATS Headquarters must be through USAFE instead of direct as we had anticipated."⁷⁵

Although the USAFE commanders tried to give General Tunner their maximum support throughout the operation, they sometimes differed with Tunner over approach and priority. Tunner, a veteran of numerous airlifts and probably the USAF leader who could best envision the potential of airlift, saw Berlin as an opportunity to demonstrate the concept's potential to a world audience. Although Tunner was a forceful, dynamic, and at times cantankerous guardian of his prerogatives, he and LeMay apparently related well even when they differed on the details of the operation.

However, about three months after Tunner arrived in Germany, Lieutenant General John K. Cannon replaced LeMay. Cannon and Tunner immediately clashed: Tunner believed Cannon's restrictions hampered airlift performance; and Cannon, undoubtedly, thought Tunner circumvented the chain-of-command and routinely violated Air Force procedures. Relations between the two deteriorated rapidly.⁷⁶ Colonel Theodore Ross Milton, the Airlift Task Force's Chief of Staff, remembered that General Tunner had such a burning drive to

⁷⁴Ltr, Brig Gen A.W. Kissner, USAF, to Maj Gen W.H. Tunner, MATS/DC, "Instructions to Commander, Airlift Task Force (Provisional)," 30 Jul 48.

⁷⁵Quoted in Hist of MATS, 1948, 166.

⁷⁶LeMay and Kantor, *Mission with LeMay*, 415-16; Tunner, *Over the Hump*, 188-190; and intvw, R. D. Launius, MAC Hist, with Gen T.R. Milton, USAF (Ret), 5 Jul 88.

make the airlift succeed, he sometimes lost all sense of perspective and patience with others and could be merciless to anyone suspected of giving less than maximum support. According to Milton, Tunner believed that General Cannon did not fully support MATS' role, and this became a self-fulfilling prophecy. At times relations between the two men became so strained, Milton recalled, that he, as chief of staff, was forced to act as intermediary. He added, it was "the toughest assignment of my Air Force career."⁷⁷

Milton reflected on these conflicts years later: "Joe Cannon had an intensely personal approach to command. It was an approach that included a love of detail, even trivia, and a desire to know everything that was going on." But, he continued, "It was also an approach that caused an immediate clash with Tunner, who had a proprietary attitude toward the airlift." Milton concluded, "The strained relations between the Commander in Chief USAFE and his subordinate, the airlift commander, were one of the less happy aspects of life in Wiesbaden, but they did not affect the operation. It was just one of those things."⁷⁸ Although the personality conflict did not materially hamper the operation, it certainly made the task of executing it more difficult.

THE TUNNER AIRLIFT PHILOSOPHY

The ultimate success of the airlift depended upon the way it was organized. General Tunner realized, when he first arrived, that even though the operation broke records daily, it could still be more efficient. His initial review convinced him that there was much work to do before the airlift could succeed during the harsh German winter.⁷⁹

Initially the Berlin Airlift contrasted sharply with Tunner's ideal. He believed, "The actual operation of a successful airlift is about as glamorous as drops of water on stone." He described his goal: "There's no frenzy, no flap, just the inexorable process of getting the job done. In a successful airlift you don't see planes parked all over the place; they're either in the air, on loading or unloading ramps, or being worked on." The aircrews were either flying, or resting between flights; and the maintenance personnel were either working on their airplane, or resting in preparation for work. Tunner summarized his vision: "The real excitement from running a successful airlift comes from seeing a dozen lines climbing steadily on a dozen charts—tonnage delivered, utilization of aircraft, and so on—and the lines representing accidents and injuries going sharply down. That's where the glamour lies in air transport."⁸⁰ Tunner was

⁷⁷Intvw, R.D. Launius, MAC Hist, with Gen T.R. Milton, 5 Jul 88.

⁷⁸Gen T.R. Milton, "The Berlin Airlift," *Air Force Magazine*, Jun 78, 63.

⁷⁹Tunner, *Over the Hump*, 167.

⁸⁰*Ibid.*, 162.

determined to establish an airlift that functioned with machine-like efficiency, only this type of organization could move sufficient food and fuel to defeat the Soviet blockade.

Tunner's approach required the careful coordination of every aspect of the airlift, including detailed procedures and exact duplication and precise execution of each phase of the operation from on-load to the return landing. Aircraft, maintenance teams, aircrews, supply personnel, and thousands of lesser-known activities were sharply regimented. All jobs were performed according to strict directives and tracked on statistical charts and tables. Tunner referred to his method as a rhythmical cadence to the airlift that allowed no excess or unplanned action. "This steady rhythm," he wrote, "constant as the jungle drums, became the trade-mark of the Berlin Airlift, or any airlift I have operated." He added, "I don't have much of a natural sense of rhythm, incidentally. I'm certainly no threat to Fred Astaire, and a drumstick to me is something that grows on a chicken. But when it comes to airlifts, I want rhythm."⁸¹

Tunner emphasized the use of all 1,440 minutes of the day. He dreamed of having an airplane land every minute. Although this was an impossible rate in 1948, it indicated the degree of proficiency he sought. He settled for the more practical, still very efficient, rate of one every three minutes his predecessor had established. This rate, he noted, "provided the ideal cadence of operations with the control equipment available at the time." He explained, "At three-minute intervals, this meant 480 landings at, say, Tempelhof, in a twenty-four-hour period. The planes that came in had to go out again, of course, and with the take-off interval also set at three minutes, this meant that a plane either landed or took off every 90 seconds." In an understatement, he noted, "There was little time wasted sitting at the ends of the runways."⁸²

Perhaps the best analogy to Tunner's approach is a conveyor belt (the corridor between western Germany and Berlin) with aircraft transporting vital supplies spaced evenly along it. All the aircraft moved at the same speed, executed their maneuvers at the same spot, and never deviated from the predetermined plan. Like a conveyor belt, the airlift could be slowed down or sped up as necessary, but it was inerrant in its regimentation. It was a most efficient approach and earned Tunner the nickname of "Willie the Whip," because of his demand for precision.⁸³

Tunner also emphasized the intangibles that he believed increased efficiency. For instance, he encouraged competition between organizations involved in Operation VITTLES. He tracked the tonnage of every unit on a

⁸¹*Ibid.*, 174-75.

⁸²*Ibid.*, 174.

⁸³Daniel F. Harrington, "Against All Odds," *American History Illustrated*, 16 (Feb 82): 32.

huge board in Airlift Task Force Headquarters, and he sponsored a newsletter that listed the efficiency of each unit and sent kudos to those with the best records of achievement. During the "Easter Parade," an attempt to deliver an unprecedented amount of cargo on Easter Sunday 1949, General Tunner visited a unit at Fassberg and belittled the commander into pushing deliveries even higher. When he got there the commander boasted that he was running ten percent ahead of his quota. Tunner replied, "That's fine, but of course it's not up to what they're doing over at Celle [another airlift base]. They're really on the ball over there."⁸⁴ Those were just the right words to prompt greater effort. Tunner remembered that the commander immediately returned to his "flight line and cracked his whip."⁸⁵ Each of these efforts improved airlift tonnage delivery rates.

THE MATS MANAGEMENT ELEMENT

The Berlin Airlift required a well-developed and efficient headquarters to function with anything nearing aircraft capacity. General Smith established the command element at Wiesbaden and it remained there when the MATS personnel arrived.⁸⁶ The Airlift Task Force reported directly to Headquarters USAFE. Its first elements included: personnel, communications, airfields, plans, supply, maintenance, cargo handling, and operations. Weather and navigation were two critical specialties included in operations.⁸⁷

Officers hand-picked by General Tunner controlled each of the headquarters functional elements and acted as liaison with the Air Force unit that provided that service to the airlift. Therefore, these officers worked closely on plans and expansion projects. For example, the airfield officer kept abreast of the condition of all the airfields, then informed the office in the Pentagon responsible for runway repairs and other needed work. Likewise, the functional manager monitored field-level and depot maintenance, both in the theater and in the United States. He then worked closely with Air Force Logistics Command's predecessor, Air Materiel Command, to ensure that the necessary services and spare parts were available.⁸⁸

⁸⁴Tunner, *Over the Hump*, 221.

⁸⁵*Ibid.*, 221.

⁸⁶General Order 61, Headquarters USAFE, 29 Jul 48, officially established the headquarters as 7499th Air Division or the Airlift Task Force (Provisional). Also, see General Order 1, Headquarters Airlift Task Force (Provisional), 31 Jul 48.

⁸⁷Tunner, *Over the Hump*, 166-67.

⁸⁸*Ibid.*, 187-88; "Special Study of Operation 'Vittles'," 29.

The growth of Headquarters Airlift Task Force (Provisional) during August 1948 can be easily illustrated by comparing the organizational charts of 3 August and 25 August. The first personnel arrived at the 1421st Maintenance Squadron (Provisional) at Oberpfaffenhofen Air Depot, Germany, during the first week and by the fifteenth the unit had seven officers and 236 airmen. The Task Force's subordinate units were only attached to the headquarters for operational control and were not subordinate in the complete sense of the term.⁸⁹

Initially the Task Force headquarters was divided into:

Command Section
 Adjutant General's Division
 Air Comptroller Division
 Headquarters Commandant
 Personnel Division
 Traffic Division
 Supply Division
 Operations Division
 Communications Division

By the end of the month the headquarters had added: Plans and Projects Division, Staff Surgeon's Section, and the Public Relations Division.⁹⁰

During August 1948 the Task Force Headquarters, an apartment house facing a small park and site of a prewar hot sulphur springs bathhouse, was

⁸⁹"USAFE and the Berlin Airlift, 1948," 47-48.

⁹⁰*Ibid.*, 48-50. The officers directing these elements were:

Deputy Commander	Captain D. W. Tomlinson, USNR
Chief of Staff	Colonel Theodore R. Milton, USAF
Staff Secretary	Captain Robert Hogg, USAF
Aide de Camp	Captain Lanham B. Thomas, USAF
Director of Personnel	Colonel Lev I. Herman, USAF
Director of Operations	Lt Colonel Robert D. Forman, USAF
Director of Supply	Lt Colonel Orville O. McMahon, USAF
Director of Maintenance	Colonel Charles D. Farr, USAF
Director of Traffic	Major E. A. Guilbert, USAF
Director of Plans & Projects	Colonel John W. White, USAF
Adjutant General	Lt Colonel Marion W. Rubble, USAF
Communications Officer	Lt Colonel Manuel Fernandez, USAF
Flight Surgeon	Lt Colonel Norman C. Veale, USAF
Comptroller	Colonel Thomas O. Newell, USAF
Headquarters Commandant	Lt Colonel C. L. Perkins, USAF
Public Relations Officer	First Lt William G. Thompson, USAF
EUCOM Liaison Officer	Colonel Hall S. Crain, GSC

a busy place as the staff met daily attempting to increase the airlift's tonnage. Chief of Staff Milton would later recall that the building seemed especially appropriate to the operation. "There were to be some hot and sulphurous times in that old apartment house in the next few months."⁹¹

Early in the operation the Royal Air Force (RAF) permanently attached three representatives to the Task Force. They worked closely with functional managers to carefully coordinate the efforts of the two nations. On 14 October the RAF was incorporated more directly into the headquarters when the United States and the United Kingdom created the Combined Airlift Task Force (CATF). The two nations merged their efforts and placed them under a single commander, General Tunner, with RAF Air Commodore J. W. F. Merer as his deputy.⁹²

The provisional and the Combined Airlift Task Force headquarters used statistics extensively to plan and evaluate the airlift. Headquarters contained a separate room where display charts and statistical data reflected the performance of every function. Tunner developed this recording and tracking system while he was organizing the "Hump" airlift. Not satisfied with simply tonnage figures, Tunner used a complex array of data to show at a glance: assigned aircraft; daily missions flown; utilization rates of aircraft; flying hours by type of aircraft, unit, and several other breakdowns; trips per assigned aircraft; aircrew status; flying times; unloading times in Berlin; ground time in Berlin; block times in Berlin; percentage of aircraft in 200-hour inspection; locations of aircraft at all times; and daily tons airlifted.⁹³

One of the most important aspects of operating a successful airlift, Tunner believed, was establishing a series of effective maintenance and supply facilities. He made this a matter of highest priority when he assumed command of the Airlift Task Force. Maintenance personnel realized that they had a limited number of aircraft, which had to be used carefully at the highest utilization rate possible. Crews worked constantly performing "as needed" maintenance and the 25-hour checks. At 200 hours the aircraft went to a depot for a major inspection, and at 1,000 hours it returned to the United States for a comprehensive overhaul.⁹⁴

All of these maintenance activities were painstakingly planned, executed, recorded, and controlled at headquarters. Whether a transport was in the air

⁹¹Milton, "The Berlin Airlift," *Air Force Magazine*, Jun 78, 60.

⁹²Rprt, CALTF, "Berlin Mission: Report of the Airlift, The Operational and Internal Aspects of the Advance Element," n. d., 18-19, contains a reproduction of the official letter establishing the combined Airlift Task Force.

⁹³"Special Study of Operation Vittles," 30-32; and statistics folder, Berlin Airlift Files, Ofc of Hist, MAC.

⁹⁴"Berlin Mission," 60-68.

or on the ground, information flowed constantly between headquarters and the field on the plane's maintenance status. All of this was carefully tracked on the boards at headquarters, where the individual aircraft were listed. Color codes showed the airplane's status: white—operational; red—scheduled maintenance; green—unscheduled maintenance; yellow—in base shops for third and fourth level maintenance; blue—200-hour inspection; and black—grounded awaiting parts.⁹⁶ These control boards were duplicated up and down the command line to indicate the condition of the fleet at a glance.

Most airlift maintenance was performed at the squadron level, with the two Navy squadrons doing their own. The technicians were divided equally between the various bases, with 148 maintenance personnel, usually trained on the same type aircraft, assigned to each squadron. These mechanics worked in three shifts, with 12 hours on and 24 hours off duty. This system became so successful that the average time required to perform the 50 and 150-hour checks was reduced to 5.5 hours, about half the time for the same procedures in the United States.⁹⁶

From the onset Berlin Airlift leaders wanted to place the major maintenance depot at Burtonwood, England, back into operation. There had been a depot there during World War II and it seemed logical to reopen it for the extensive 200-hour inspections on the C-54s. General Smith in his brief tenure as commander had been unable to begin the project. With the shift in perspective from a short to a long airlift, General Tunner made a maintenance depot a high priority issue and General LeMay and his staff supported the idea. Unfortunately, the depot could not be opened immediately, so Tunner had to make other arrangements.⁹⁷ As he explained in a letter to General Kuter, "I am putting a maintenance detachment in the USAFE Depot at Oberpfaffenhofen, near Munich, at least temporarily." This freed the operating bases to do only preflight and intermediate inspections. The maintenance detachment would perform the 200-hour inspections and the C-54s would return to Oklahoma City for 1000-hour major inspections.⁹⁸

⁹⁶*Ibid.*, 76.

⁹⁶*Ibid.*, 75-85; ALTF (P) Reg 66-3, "Maintenance," 1 Sep 48; directive, USAFE/CS, "Supply and Maintenance Procedure for First Airlift Task Force," 26 Nov 48; and other documents in Maintenance Folders, Berlin Airlift Files, Ofc of Hist, MAC.

⁹⁷Gen Leon W. Johnson, 3 AD/CC, mentioned in his USAF Oral History that the major reason Burtonwood could not be activated immediately was because it was being used for storage and had to be cleaned out. One of the items stored there was whale meat, of all things. See Oral History of Gen Leon W. Johnson, 14 Apr 65, USAF Historical Research Center, Maxwell AFB, AL.

⁹⁸Maj Gen W.H. Tunner, ALTF/CC, to Maj Gen L.S. Kuter, MATS/CC, n.s., 3 Aug 48.

Since Oberpfaffenhofen lacked the space or facilities to support the additional maintenance of an ever-growing fleet of C-54s, this was a temporary solution at best.⁹⁹ Air Force Secretary Stuart Symington and General Vandenberg visited the theater in mid-August and Tunner discussed the problem with them. The Air Force Secretary and Chief of Staff visited Burtonwood and agreed that it had "the potential required for a long term operation." They told Tunner they would support his effort to have the depot ready by 1 October 1948.¹⁰⁰

General Tunner did not meet his target-date; however, on 2 November he finally activated the maintenance facility at Burtonwood.¹⁰¹ Major General Frederick Bosum, a logistics officer with Air Materiel Command, promised to complete seven 200-hour inspections per day. Using production-line maintenance (PLM) procedures, the depot towed each C-54 through a series of checkpoints where experts in specific components worked on the aircraft.¹⁰² Tunner soon realized, however, that the facility could not meet the quota of seven complete inspections each day. He recounted, "The depot is just outside of Liverpool, and it was dingy, dirty, and depressing-looking. Living quarters, containing only those tiny English coal stoves, were cold and dark." He continued, "The chow was greasy and tasteless. The weather was the poorest—rain, sleet, smog—of anywhere in Britain." Tunner concluded that this obviously affected the morale of the maintenance crews. Burtonwood reminded him of the "Hump" airlift, "... the supplies and equipment and enough trained people to perform a highly technical assignment just hadn't been made available from the States."¹⁰³

Not only was Tunner unable to change the weather, he could not eliminate the red tape inherent in the cumbersome organization. USAFE was responsible for Burtonwood, so all he "could do was point out wherein the trouble lay to the responsible persons at the depot, and hope that something would be done."¹⁰⁴ The output at the depot dropped to only two airplanes a day. The

⁹⁹Rprt, "Average Elapsed Time A/C at OAFD," Oct 48.

¹⁰⁰*Ibid.*, 16 Aug 48.

¹⁰¹Ltr, CALTF to USAFE/CC, "Plans for Transfer of C-54 200 Hour Inspection and Maintenance Project from Oberpfaffenhofen Air Force Depot to Burtonwood, England," 2 Nov 48; plan, "Transfer of C-54 200 Hour Aircraft Inspection and Maintenance Project from OAFD to BAFO." n. d.

¹⁰²"A Special Study of Operation Vittles," 86-90.

¹⁰³Tunner, *Over the Hump*, 193.

¹⁰⁴*Ibid.*, 193.

number increased during the winter, but the depot never met expectations.¹⁰⁵ To compensate for Burtonwood's low output, the Airlift Task Force reestablished 200-hour inspection capability at selected bases in Germany.¹⁰⁶

The maintenance problems at Burtonwood illustrated Tunner's primary concern about the airlift's organizational structure: the Airlift Task Force was responsible for hauling unprecedented amounts of cargo into Berlin, but had no real authority over the support resources needed for the job. As General Tunner explained in a 1981 interview, "When I needed parts and supplies, I had to go through the local air force's supply system because they had the depots. If they couldn't get the parts I needed, I would wire the United States." As a result of this type of organization, Tunner indicated, "I could not get parts, engines, and supplies directly. I had to go through someone else to get them. That took time, and it was aggravating. Time was critical."¹⁰⁷

Despite these problems, a series of decisions in early August 1948 helped the airlift to become more efficient every day. A staff conference on 9 August decided to set up bulletin boards to improve the flow of information; to specify that C-54s should cruise at 170 miles per hour en route to Berlin and 185 miles per hour when returning empty; to determine when the bad weather required instrument flight rules (IFR) en route and visual flight rules (VFR) at the terminals, three instrument altitudes were to be used for each block, with each successive block at the alternate altitude; to change officer-of-the-day procedures to ensure that at least two officers were on duty at all times; and, when airlift operations officers had to clear all passengers on airlift planes.¹⁰⁸

These decisions and others helped to increase the efficiency and effectiveness of the Berlin airlift until it became routine by late summer and early fall. "In fact," recalled General Milton, "one of the visible disappointments to visitors—and there was a steady stream of them, everyone wanted to see the airlift—was the lack of excitement associated with this world-famous activity." He could take visitors to the flightline at any of the airlift bases and the scene was always the same: "There would be a few airplanes on the ramp

¹⁰⁵CALTF, Recommendations, "Agenda," n. d. [March 49] Berlin Airlift Files, Ofc of Hist, MAC, contains a scathing critique and numerous recommendations for Burtonwood Depot.

¹⁰⁶Intvw, Col White, CALTF, by Capt Holt, USAFE/HO, [Mar 49], Berlin Airlift Files, Ofc of Hist MAC.

¹⁰⁷Maj E. G. Wittel, "Interview, Mr. Airlift, Lieutenant General William H. Tunner," *Airlift Operations Review: Journal of the Airlift Operations School*, 3 (Apr-Jun 81), 1-6. Also see intvw, Col White by Capt Holt above.

¹⁰⁸"USAFE and the Berlin Airlift, 1948," 50-51.

being rapidly unloaded, one landing, one taking off, and that was it, an unvarying pattern any time of the day or night."¹⁰⁹

THE SEARCH FOR BASES

The calm scene that Milton described reflected a basic management approach toward airlift that had been discovered in World War II. It also applied to the operational structure. After the Task Force adopted more efficient procedures and acquired the needed aircraft and personnel, a lack of airfields presented the greatest challenge. Initially only Rhein-Main and Wiesbaden fed American airplanes into the two air corridors leading to Berlin and everyone landed and off-loaded at Tempelhof. Within days General Smith recognized the need to improve Berlin's airfields. Tempelhof, built in the 1930s as an assembly plant for small fighters, did not have runways that could endure the pounding of heavy transports. The minutes of a 16 July meeting of the National Security Council acknowledged, "The airdrome situation is critical since Tempelhof is breaking up under its present load."¹¹⁰

Berlin military authorities shored up the Tempelhof runways with steel planking and hired Berliners to perform ad hoc maintenance between landings. General LeMay recalled, "It got so bad that we had to keep a gang of laborers on the runway with asphalt, mats, shovels, wheelbarrows and all." He described the scene: "Down one of the transport planes would come slamming . . . loose material scattered wildly . . . out the workmen came a-skipping: they poured, pounded, beat the mats down into place . . . then they went scrambling back to get out of the way of the next C-54." He explained, "They didn't want to kill any demons, either. Just tried to keep the runways in working condition."¹¹¹ This makeshift approach worked, but the airlift needed another airfield, one built for the heavy airplanes flying Operation VITTLLES.

As early as mid-July General Smith's staff scoured Berlin for a suitable airfield site.¹¹² They found a relatively flat and unobstructed area, with good railroad and highway facilities and acceptable approaches, at Tegel, in the French northern part of the city. During World War II the Germans had used the area to train anti-aircraft units and related personnel. Smith recommended building an airfield at Tegel and General Clay presented the idea to the NSC on 23 July. Secretary of State George C. Marshall wondered "if the construction

¹⁰⁹Milton, "The Berlin Airlift," *Air Force Magazine*, June 78, 64.

¹¹⁰Memorandum for the President, 16 Jul 48, "Memo for President: Meeting Discussions (1948)" folder, Box 220, President's Secretary's File, Truman Papers.

¹¹¹LeMay and Kantor, *Mission with LeMay*, 418-19.

¹¹²"Memorandum for the President," 16 Jul 48.

of the field would absorb too many resources in Germany." Clay assured him it would not, "The only cut in the air lift would be the paving equipment, which would require a full day's airlift. Otherwise construction could be started right away with material available locally." Marshall gave his full support, suggesting "there would be a good psychological effect if we proceeded with the construction of the airfield, as indicating that we are in earnest about staying in Berlin." The NSC agreed and supported the airfield construction at Tegel.¹¹³

The building of Tegel was an impressive operation. Using crushed brick from bombed out buildings, thousands of Berliners built the runway's foundation without heavy equipment. General Milton recalled, "Altogether, the building of Tegel was an unforgettable sight: women in high heels pushing heavy wheelbarrows, men who looked like doctors or professors, and probably were, wielding shovels." He noted that although most of the work was done by hand, "The enthusiasm of this unlikely crew was infectious. Not surprisingly, the airfield was finished in remarkable time, buildings, runways, ramps, all ready to go."¹¹⁴ Work on the runway began in late July and continued through October.

When the time came to fly in the heavy equipment to pave the runway, it could not fit into the transports. Someone suggested cutting the bulldozers, rock crushers, and steam rollers into smaller parts with acetylene torches and then hauling them to Berlin piecemeal. Once this was done, workers welded the equipment back together and used it on the runway.¹¹⁵ Milton remembered, "It was work of true artistry."¹¹⁶ The first VITTLES flight landed at Tegel on 5 November 1948.¹¹⁷

As the aircraft flow into Berlin increased, the Airlift Task Force also examined the possibility of expanding USAF operations to Gatow airfield in the British sector. Planning began on 2 August and by 20 August American cargo aircraft could be directed to either Tempelhof or Gatow, depending on the traffic level.¹¹⁸ The completion of Tegel and the use of Gatow helped to

¹¹³*Ibid.*, 23 Jul 48.

¹¹⁴Milton, "Berlin Airlift," 64.

¹¹⁵LeMay and Kantor, *Mission With Lemay*, 419.

¹¹⁶Milton, "Berlin Airlift," 64.

¹¹⁷LeMay and Kantor, *Mission With LeMay*, 419, and *The Berlin Airlift: A Brief Chronology* (Scott AFB IL: Office of MAC History, 1988), 9-10.

¹¹⁸"Minutes Taken in Staff Meeting Held at 1700, 2 August 1948," copy in appendix to August 1948 History of Headquarters, Airlift Task Force (Provisional).

improve the cargo receiving operations in Berlin; the next area of concern was the facilities at the takeoff sites in West Germany.

Upon arrival in late July, General Tunner continued General Smith's efforts to find adequate bases to accommodate the growing number of airplanes. Colonel John W. White, Task Force Plans Officer, carefully studied the problem and suggested using bases in the British occupation zone. They were closer to Berlin, had easy terrain to fly over, and provided the opportunity to maximize the number of incoming aircraft.

Preliminary planning to expand American operations to RAF Fassberg began on 4 August 1948. Planners chose Fassberg for three reasons: it was close to the Bremen Port of Embarkation; flying time to Berlin was 55 minutes, compared to two hours from Wiesbaden and Rhein-Main; and the weather and terrain were better than at the American bases. The Americans and British reached an agreement and 7496th Air Base Wing personnel began to arrive at the installation on 13 August. The Americans were to bring their own supplies, but only British food and fuel were available initially. Supplies reached the 7496th on 16 August, and the first vehicle refueling units arrived two days later. American C-54s first flew out of Fassberg on 21 August. Although, at first, there was some difficulties with living conditions and confusion over operational authority, the advantages of expanding to Fassberg were immediately apparent.¹¹⁹

First Lieutenant Gail S. Halvorsen described some of the routine problems the aircrews encountered during the airlift. His quarters were so bad at Rhein-Main that he moved into the hayloft of a barn on base. He and a few buddies lived there until late in 1948. The loft was relatively comfortable, but if the men had needed more than a place to sleep it would have been unacceptable.¹²⁰

Halvorsen and his colleagues coped with the quarters, but one issue really damaged the efficient operations at Fassberg. Several airline executives urged Tunner to eliminate the squadron organizational structure and adopt a management approach similar to the airlines. He abolished the squadrons at Fassberg and this impersonal approach destroyed all sense of unit *esprit de corps*. The experiment failed miserably.¹²¹ The solution was relatively easy, however. After Tunner discovered the problem, he reorganized the pilots and mechanics into squadrons, giving them a sense of cohesion and identity. Although he also improved the housing, according to General Milton, "the key factor appeared to have been the creation of squadrons. Military people, it

¹¹⁹"USAFE and the Berlin Airlift, 1948," 52-58.

¹²⁰Intvw, R. D. Launius, MAC Hist, with Col Gail S. Halvorsen, USAF (Ret), 13 May 88.

¹²¹Intvw, R. D. Launius, MAC Hist, with Gen T. R. Milton, USAF (Ret), 5 Jul 88.

seems, want to belong to some identifiable unit and not just to some great amorphous organization. The lesson was not needed again."¹²²

Soon after flight operations began at Fassberg, the Task Force also moved C-54s to RAF Celle, near Hanover. The British built a 6,400-foot runway for what had previously been a fighter base and by the end of November C-54s occasionally flew from Celle to Berlin. On 15 December these flights became permanent, and the 317th Troop Carrier Group moved from Wiesbaden to Celle to support the airlift from there.¹²³

A PATTERN OF OPERATIONS

Early in the operation General Smith established a pattern of aircraft flow that called for airplanes to fly at five different altitudes, from 5,000 to 7,000 feet, and at three minute intervals. This insured that aircraft at the same altitude were 15 minutes apart. Later the flight altitudes were reduced to three for simplicity; however, the interval remained the same. Aircraft flying at the same altitude were then spaced nine minutes apart. With airplanes converging on Berlin at three minutes intervals, the optimum working rhythm, all facets of the flight had to be precise.¹²⁴

To ensure this precision, by 7 August the Airlift Task Force Operations Monitoring Control Center instituted a rigid set of procedures that went beyond those that Smith had initially established. Rhein-Main controlled traffic originating at either Wiesbaden or Rhein-Main. All inbound traffic used the most southern corridor. At takeoff, each pilot received the numbers of the three airplanes ahead of him and the two behind, so that he knew his exact location in the flow. Every aircraft took off at a precise time and flew an exact pattern at a fixed altitude and rate of speed. They flew over location markers to ensure that they entered the corridor at the planned moment. When a pilot entered the corridor, controllers broadcast the time so that everyone in the formation knew the exact location of the aircraft.

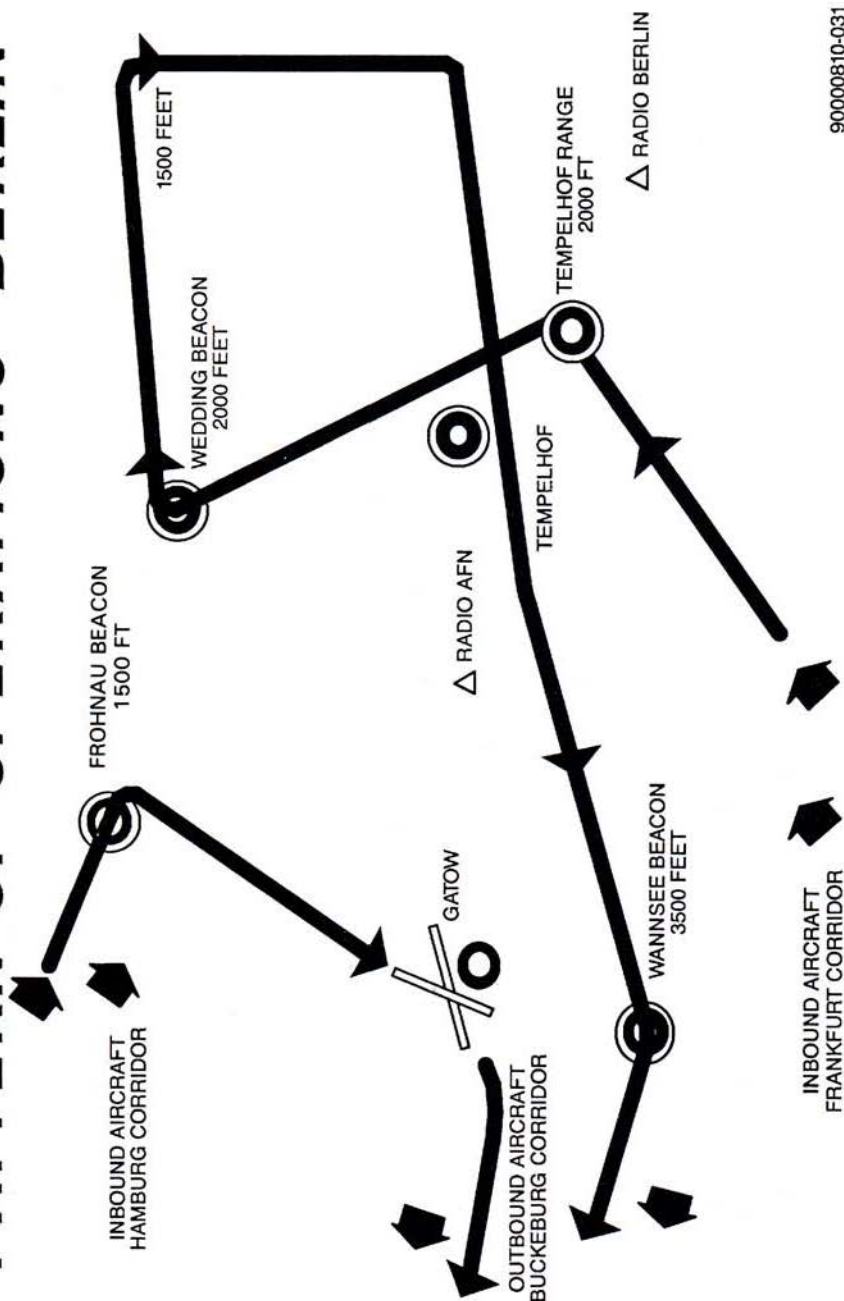
Jack O. Bennett, one of the pilots, recalled the close monitoring of these flights: "The radar coverage from the ground was incredibly accurate. If our airplane crept up or fell back, even a few feet, on the aircraft preceding us, radar would warn us to adjust our airspeed by a minuscule knot. We couldn't believe it was possible to fly this accurately." He continued, "Viewed from the radar screen on the ground, the aircraft appeared as individual green pearls, as

¹²²Milton, "Berlin Airlift," 61.

¹²³*The Berlin Airlift: A Brief Chronology*, 7 and 12.

¹²⁴"Special Study of Operation Vittles," 53-55, and Stanley M. Ulanoff, *MATS: The Story of the Military Air Transport Service* (New York: Franklin Watts, 1964), 24-26.

PATTERN OF OPERATIONS · BERLIN



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Airspace over Berlin. The heavy traffic and inclement weather required precision flight paths to avoid midair collisions over the city.



Final Approach to Tempelhof. Note the apartment buildings on either side of the glide path.

perfectly spaced as on a woman's necklace, all moving with metronome-regularity to Berlin.¹²⁵

General Tunner described the flight pattern into Berlin after crossing the Fulda range station: "From there on it was a straight flight up the corridor, chugging along at 170 miles per hour . . . Over Berlin the pilot turned left at a beacon a few miles on the right side of Tempelhof, proceeded directly across the airport at right angles to the runway, and started making his descent." To land the pilot "made three right turns, flying a box flight pattern, simultaneously lowering down to fifteen hundred feet. He would now be lined up with the runway and would come in at 120 miles per hour, lowering slowly until he was at four hundred feet. If the ceiling was over four hundred feet and visibility a mile or better, he would come in." If weather was below these standards, the pilot returned to his home station via the center corridor (reserved for returning flights only) without delivering his cargo.¹²⁶

¹²⁵Jack O. Bennett, "Reminiscences and Recollections of an Airlift Pilot," in Andreas Anderhub, *Concerning the History of the Berlin Crisis, 1948-49* (Berlin: Blockade, Airlift and Airlift Gratitude Foundation, n. d.), 62-63.

¹²⁶Tunner, *Over the Hump*, 173.

Once on the ground in Berlin, the pilot taxied his aircraft into an unloading area. Tunner determined on his first visit to Tempelhof that the airplanes spent too much time on the ground, despite a lot of apparent effort to speed up the turn-around. Although the ground crews unloaded the planes quickly, the aircrews spent time in the operations office, in the snack bar, or checking on weather. To remedy the situation, Tunner ordered the crews to stay with their aircraft. He arranged for a truck with the unloading crew and an operations officer to meet the incoming aircraft before it had even finished taxiing. The weather officer followed with the latest conditions. Then a vehicle, "fitted out like a snack bar," brought "hot coffee, hot dogs and doughnuts" to the crew. Jeeps also brought any other needed supplies or information directly to the aircraft.¹²⁷

Task Force officials also studied ground crew procedures. Motion-study experts used stopwatches and statistical charts to analyze every aspect of the unloading method. They suggested a way for a 12-man crew to load ten tons of bagged coal into a C-54 in six minutes. The officials also instituted changes that reduced unloading times from 17 to five minutes and refueling times from 33 to eight minutes. The staff's recommended changes reduced turn-around time in Berlin from 60 to 30 minutes.¹²⁸

Also, Tunner introduced two important new innovations to the airlift pattern. First, recognizing the need for one standard and constant set of flight rules, he directed that all aircraft in the flow to and from Berlin would fly on instruments at all times. This decreased the effect of weather and darkness on aircraft operations. Second, "If a pilot should happen to miss his landing for any reason whatsoever, he would continue straight out on course and return the two hundred to four hundred miles to his home base."¹²⁹ Otherwise, a traffic-jam could develop over Berlin slowing down all the aircraft.¹³⁰

Germany's harsh winter constituted the single greatest threat to the airlift's transports. "One of our main interests and concerns over here in the Airlift lies in the weather," General Tunner wrote in December 1948. "We have had 213 hours of closed weather (below minimums) out of the entire 720 hours in the month of November. Of the remaining time, 444 hours were instrument," he continued. The Airlift Task Force worked to ensure that tonnage and safety rates remained constant. Tunner noted, "Whenever the weather breaks from closed to instrument, we do our best with all the aircraft we have. With the

¹²⁷*Ibid.*, 170-71.

¹²⁸*Ibid.*, 171; and Harrington, "Against All Odds," 32.

¹²⁹Tunner, *Over the Hump*, 172.

¹³⁰Harrington, "Against All Odds," 32.

system wherein everyone stays on his toes awaiting the weather breaks, we use every hour that is available for flying."¹³¹

They increased the number of weather personnel assigned to Operation VITTLES from 308 to 570. The weathermen brought in new types of measuring equipment and tried different techniques of gathering information. During inclement weather observers sometimes stood at the end of the runways and counted the number of approach lights they could see. They also flew more weather reconnaissance flights. For a while the radio operator on every seventh C-54 would report weather conditions at four points along the air corridors. The weather officer phoned weathermen at other sites and produced a composite forecast for the airlift managers. A weather officer also served on the CALTF staff to contribute the latest conditions during airlift planning. These efforts paid off. Although the winter of 1948-49 was one of the worst on record, the airlift managed to deliver enough supplies to sustain Berlin.¹³² The CALTF Commander recognized the Air Weather Service's (AWS) contribution in August 1949, noting that these "forecasts were as good as possible, being limited only by the current status of progress of the science of weather forecasting. More certainly could not have been expected."¹³³

Not only did the airlift require the best weather forecasters, but total instrument flying and poor weather conditions also necessitated excellent air traffic controllers. Unfortunately, there were too few controllers, with too little experience, using poor equipment when the operation first began. On 21 August 1948 General Tunner complained to MATS Commander General Kuter that "there appear to be no traffic controllers in the Air Force. We had some during the War in the ICHD [India-China Division], but they have apparently all got out and are now with the airlines or CAA [Civil Aviation Authority]." Tunner considered the people in Europe to be "traffic followers rather than controllers." He explained, "The magnitude of this operation and the tight schedules which we must maintain with split-minute timing have showed how critical this lack is. I think you would do well to have your people study the problem and then start training a specialist corps of traffic controllers." The airlift commander concluded, "I foresee great difficulty if we are not furnished with some

¹³¹Ltr, Maj Gen W. H. Tunner, CALTF/CC, to Maj Gen W. F. McKee, USAF/CV, 1 Dec 48.

¹³²Alfred Goldberg, ed., *A History of the United States Air Force, 1907-1957* (Princeton, N. J.: D. Van Nostrand Co., 1957), 238-38, and Charles C. Bates and John F. Fuller, *America's Weather Warriors, 1914-1985* (College Station: Texas A & M University Press, 1986) 145-47.

¹³³Maj Gen W. H. Tunner to Comd Ofc, 2105 Weather Group, "Support Given to Airlift Task Force," 13 Aug 49, as quoted in Bates and Fuller, *America's Weather Warriors*, 147.

competent traffic controllers soon."¹³⁴ He blamed many of the airlift's difficulties on inadequate air traffic control and believed that the situation would only get worse when winter began.

When Tunner informed the local commander of Airways and Air Communications Service (AACS) of the inadequacies, the commander replied that some better trained personnel were coming from the United States.¹³⁵ Kuter also convinced USAF of the pressing need and Headquarters USAF recalled twenty CAA traffic controllers to active duty for 90 days. He wrote Tunner, "Their papers are now being hand processed and the first contingent will leave here for Rhein-Main today, 2 September, on Priority One. This group of experienced personnel should be of real assistance to you."¹³⁶ As an example of the speed of this action, one controller received notification of the recall on Saturday and he was directing traffic at Tempelhof on the following Friday. During the peak of the airlift 90 officers and 700 airmen were assigned to German-based AACS units.¹³⁷

As the number and experience of the air traffic controllers increased, so did their reliability. State-of-the-art electronic and visual landing aids also contributed appreciably to the airlift's success. A newly-installed area control radar in Berlin tracked incoming aircraft 60 miles down the air corridors. Other modern radar handled the closer traffic, including the difficult approach to Tempelhof. The airport, located in the middle of Berlin and surrounded by encroaching hills, was cursed with the worst imaginable flight path. The approach passed between two rows of seven-story apartment buildings. Every landing taxed both the GCA personnel and the flight crew. Finally, by winter operations officers created a landing procedure that maintained a remarkable degree of safety. General Tunner noted, "Without the wholehearted support, cooperation, and technical assistance of the Airways and Air Communications Service, the success of the Berlin Airlift would never have been possible."¹³⁸

¹³⁴Maj Gen W.H. Tunner, ALTF/CC, to Maj Gen L.S. Kuter, MATS/CC, n.s., 21 Aug 48.

¹³⁵*Ibid.*, 16 Aug 48.

¹³⁶Maj Gen L.S. Kuter, MATS/CC, to Maj Gen W.H. Tunner, ALTF/CC, n.s., 2 Sep 48.

¹³⁷*The Air Force Communications Command: Providing the Reins of Command, 1938-1981, An Illustrated History* (Scott AFB, IL: AFCC Ofc of Hist, 1981), 53.

¹³⁸*Ibid.*, 58; Goldberg, *History of the United States Air Force*, 239; and, Clayton Knight, *Lifeline in the Sky: The Study of the U. S. Military Air Transport Service* (New York: William Morrow & Co., 1957), 61-63.

One project, dubbed "Operation Little Vittles," was an especially important contribution to the morale of the airlift. First Lieutenant Gail S. Halvorsen, an airlift pilot, decided to supplement Berlin's children's meager supply of candy. In June 1948 he was struck by the thought that, unlike other European children he had met, the Berliners did not ask him for gum or candy when he was on the street. He handed out some sweets anyway. The next day he dropped three handkerchief "parachutes" with candy from the flare chute in the bottom of his aircraft; thereafter, he made daily drops. At first Halvorsen was concerned that General Tunner might disapprove, but the Task Force commander immediately grasped the morale benefit of the action for both the aircrews and the Berliners. Tunner institutionalized the "Little Vittles" airdrops by establishing collection points for candy and handkerchiefs and by arranging special flights for Halvorsen to circle the city dropping candy, even to children in the Soviet zone. It was a *tour de force* as a morale booster, a unifying effort, and a means of ensuring allied cooperation.¹³⁹



Lieutenant Gail Halvorsen, who initiated the candy drop "Little Vittles," meeting with German children in Berlin.

¹³⁹"Pilot Tells of Candy-Bombing of Children by Berlin Airlift," *Philadelphia Bulletin*, 16 Sep 48; "Gum and Chocolate Bars from Heaven Rain Down on German Children," *Memphis Press-Scimitar*, 27 Sep 48; "Where Candy Drops as if From Heaven," *Washington Post*, 9 Oct 48; and Tunner, *Over The Hump*, 207-09.



“Operation Little Vittles” boosted the morale of both Berliners and the airlift force. Here two enlisted men show the handkerchief parachutes used to drop the candy on 28 September 1948.

All of these diverse elements came together to establish the Berlin Airlift as an operation that could continue indefinitely. Milestones along the way reflected the airlift's success. On 7 July, during the command of General Smith and before the arrival of the C-54s, tonnage exceeded 1,000 tons for one twenty-four hour period. This was especially important when compared with the seemingly insurmountable goal of 10,000 tons per month for the “Hump” airlift in 1943. The airlift set another record of 1,918 tons on 30 July 1948. But that record was broken on the following day, and almost every other day until winter set in. The harsh weather did not end the airlift, and by 5 November the total tonnage delivered had reached 300,000 tons.

The tonnage records climaxed with the “Easter Parade” on 16 April 1949. Wanting to stretch the potential of the airlift force and to send a message to the Soviet Union that the blockade would not succeed, Tunner ordered a maximum effort for 24 hours. His goal was one completed mission for each of the 1,440 minutes of the day. The Task Force did not reach that goal. It did complete 1,398 missions and delivered 12,841 tons of food, coal, and other supplies. Colonel William Bunker, an Army transportation officer, put it into another perspective: “You guys have hauled the equivalent of six hundred cars of coal



C-54s on the ramp at Wiesbaden Air Base during the winter. Contrary to predictions, the harshest German winter in decades failed to defeat the airlift.

into Berlin today. Have you ever seen a fifty-car train? Well, you've just equaled twelve of them."¹⁴⁰

THE END OF THE AIRLIFT

From the beginning of the airlift, American diplomats worked feverishly to resolve the blockade, at first with little success. The Soviets were positive that the airlift would fail, that Berlin would starve or freeze, or both, and that the western allies would vacate the city. Russian experts, and some allied strategists, believed that airlift alone could not support a city of more than 2,000,000 people. All previous attempts at a total aerial resupply had failed. During World War II, the vaunted Luftwaffe failed to deliver 300 tons of supplies per day to the German Army at Stalingrad, and the troops were cut off by the Soviets. General Tunner suggested that the German airlift failure at Stalingrad, "as one of the factors in the early Russian reaction to the

¹⁴⁰Tunner, *Over the Hump*, 219-22, and Richard Collier, *Bridge Across the Sky: The Berlin Blockade and Airlift, 1948-1949* (New York: McGraw-Hill Book Co., 1978), 175-86.

American-British Airlift into Berlin. The Russians had never had an airlift themselves, and they didn't take ours seriously until it was too late."¹⁴¹

Even when the Soviets realized that the allies could deliver considerable tonnage into Berlin, they still hesitated to negotiate. They believed the allies could not sustain that rate through the harsh German winter. To help ensure failure, the Russians began to harass airlift planes in the corridors with fighters. They fired antiaircraft weapons, shined searchlights into pilots' eyes during final approach, and aggravated the flyers with other actions. This harassment became more common as the airlift progressed. For instance, only 11 incidents occurred in October 1948 and 17 in November; but there were 146 in March 1949. After March the rate declined again. Table 3 reflects the total of 733 incidents between 10 August 1948 and 15 August 1949.¹⁴²

TABLE 3

**SUMMARY OF HARASSMENT INCIDENTS
IN AIR CORRIDOR TO BERLIN**

10 August 1948-15 August 1949

Buzzing	77
Close Flying	96
Flak	54
Air-to-Air Fire	14
Flares	59
Radio Interference	82
Searchlights	103
Air-to-Ground Fire	42
Ground Fire	55
Ground Explosions	39
Rockets	4
Balloons	11
Chemical Laying	54
Bombing	36
Unidentified Objects	7
Total	733

SOURCE: Memo, ALTF/IN to ALTF/CC, "Summary of Corridor Incidents," 2 Sep 49; and, news release, USAFE Office of Information, n. s., n. d.

¹⁴¹Tunner, *Over the Hump*, 183-84.

¹⁴²Memo, ALTF/IN, to ALTF/CC, "Summary of Corridor Incidents," 2 Sep 49; and news release, USAFE Office of Information, n. s., n. d.



On 12 May 1949 airlift personnel jubilantly announce the end of the blockade.

These actions were mere nuisances, however, and did not significantly affect the operations. At the same time, the Soviets could have prevented the airlift by jamming the air traffic control and ground control approach radio frequencies. The operation's success depended on the pilots' ability to fly on instruments and to operate in tight and precise traffic patterns. Intermittent jamming, interrupting radar signals, or using electronic countermeasures (ECM) could have thrown the operation into chaos and aircrews into grave danger. Perhaps one of the reasons for the lack of meaningful Soviet harassment against the airlift was the American deployment of 90 B-29 long-range bombers to Europe. While these aircraft could not strike with nuclear weapons, the Soviets did not know that. There is no doubt that the B-29s helped to deter any rash Soviet response to the airlift.¹⁴³

¹⁴³Memorandum for the President, 16 Jul 48, Truman Papers; Milton, "Berlin Airlift," 65; and Harry R. Borowski, "A Narrow Victory: The Berlin Blockade and the American Military Response," *Air University Review*, 32 (Jul-Aug 81): 18-30.

The airlift's success during the winter of 1948-49 began to erode Soviet resolve, and the "Easter Parade" completely destroyed it. "It was that day, that Easter Sunday," recalled Tunner, "that broke the back of the Berlin Blockade. From then on we never fell below nine thousand tons a day; the land blockade was pointless."¹⁴⁴ There were hints, however, that the Soviets sought a settlement as early as January 1949, and the Easter flights were the extra push they needed to end the crisis. In any event, nine days after the all-out effort on Easter Sunday, the Tass news agency revealed that the Soviet Union was willing to lift the blockade. On 4 May the negotiators announced that the blockade would end on 12 May. As promised, on that day the Soviets reopened the rail lines and highways from the West into Berlin. Fearing that the Soviets might reinstate the blockade after the allies had deactivated the Combined Airlift Task Force, General Clay continued the operation through the summer to stockpile a reserve food and coal supply. On 30 July 1949, the allies announced that the airlift would officially end on 31 October.¹⁴⁵



The last "Operation Vittles" flight left Rhein-Main Air Base on 30 September 1949. Sister ships fly in formation overhead to mark the end of the airlift.

¹⁴⁴Tunner, *Over the Hump*, 222.

¹⁴⁵Goldberg, *History of United States Air Force*, 241; and Davison, *Berlin Blockade*, 254-80.

DISMANTLING THE AIRLIFT

From the beginning of MATS' participation in the Berlin Airlift, Task Force Headquarters realized that dismantling the airlift would be complicated and difficult, and require careful planning. As early as 10 September 1948, the Task Force staff was working with USAFE on phase-out plans for both personnel and aircraft. General Clay intended to continue the airlift on a reduced basis after the Soviets lifted the blockade; therefore, the schedule to return aircraft to the United States was based on a gradual reduction.¹⁴⁶

During this early planning, MATS focused on the return of materiel and the reestablishment of peacetime schedules.¹⁴⁷ In late April 1949 a USAFE message, entitled "Possible Termination of Berlin Blockade and Subsequent Redeployment of Aircraft," requested MATS to estimate the optimum rate that the command's Atlantic bases could accept returning VITTLES aircraft.¹⁴⁸ At the same time, Headquarters USAF outlined MATS' fundamental responsibilities for withdrawal and redeployment: (1) establishment of a ferry squadron; (2) establishment of logistical support; (3) recommendation on returning units to United States; and (4) setting of priorities for reestablishment of services by areas. Leaders from the command recommended, as part of the response to USAF, that USAFE organize "Terminal Destination" units in VITTLES and return personnel by squadron instead of as individuals.¹⁴⁹

The final plan for the phase-out of VITTLES, approved on 16 May, provided that the airlift would continue at approximately 75 percent capacity until "D-Day," which was established as 1 August 1949. At that time, the Combined Airlift Task Force would begin releasing the final resources for return to the United States. The plan, divided into five phases, would close the Replacement Training Unit (RTU) at Great Falls, Montana, on D-Day. Of the 19 C-54s assigned to RTU, those with 800 hours or more flying time would go to reconditioning; RTU would release the rest directly to MATS. The Navy squadrons, VR-6 and VR-8, would not be recycled through reconditioning, but go directly back to MATS' Pacific Division. The remaining airlift C-54s would return to the United States in increments of 50 each month for three months after 1 August in Phases I through III. Then the rest of the C-54s left in Europe after the completion of Phase III would return to the United States.

The plan also directed USAFE manpower specialists to screen personnel for length of overseas service remaining and select those with at least six

¹⁴⁶Ltr, Maj Gen W.H. Tunner, ALTF/CC, to Maj Gen L.S. Kuter, MATS/CC, "Berlin Airlift," 10 Sep 48.

¹⁴⁷MATS Weekly Diary, Plans & Operations, 8 Dec 48.

¹⁴⁸Msg, USAFE EAFEP 3005 to MATS, n.s., 29 Apr 49.

¹⁴⁹*Ibid.*; mins, MATS/DO, "Staff Meeting," 3 May 49.

months left for retention. General Cannon, as USAFE Commander, then established a liaison with MATS to facilitate personnel transfers in five phases. Phase I did not require the movement of any personnel. Phase II (D-Day plus 31 to 60) directed that 497 officers and 2,146 enlisted men return to the United States or be reassigned to MATS units within USAFE. Phase III (D-Day plus 61 to 90) called for the movement of 613 officers and 2,430 enlisted, Phase IV (D-Day plus 91 to 120) for 383 officers and 1,128 enlisted, and Phase V (D-Day 121 to 180) for 359 officers and 1,988 enlisted. During the last phase additional personnel would return to MATS to insure that USAFE did not exceed its approved strength on the last day of the movement.¹⁵⁰

The VITTLES withdrawal plan provided not only for the return of aircraft and personnel, but also the great quantities of necessary supplies and equipment that supported the airlift. By mid-1949, for example, the great bulk of all spare parts for the C-54s was in Europe.¹⁵¹ The supply contingency plan for the termination of VITTLES was entitled Plan BERNADINE.¹⁵² The logistics annex to the withdrawal plan instructed commanders who would be receiving additional C-54s to order the necessary spare parts and engines to support the increase in aircraft. The MATS Commander directed his field divisions to submit, by teletype or radio, their requirements for crash trucks, maintenance stands and docks, fork lifts, high lift loaders, tie down equipment, power plants, jacks, and engine build-up stands. Headquarters MATS would then request the early return of these items from USAFE.¹⁵³

In order to make the transition of pilots smoother during the redeployment, MATS ordered the receiving division headquarters to review the flight records of each Air Force pilot or Naval aviator to determine who was eligible for transition to transport plane commander, first pilot, or second pilot. The pilots would then begin training for the appropriate rating. Division commanders were told to designate a unit within their commands to complete the transitions and training.¹⁵⁴

As the time for implementation of the withdrawal plan neared, airlift leaders decided to meet their quota of 50 aircraft per month by returning four daily

¹⁵⁰Hist of MATS, 1949, 35.

¹⁵¹Rprt, MATS, "Daily Conference," 3 May 49.

¹⁵²Msg, CSAF to MATS, AFCAG-30 54246 and 54247, n.s., 5 May 49; and msg, AMC to MATS/AT 3452, n.s., 21 Jul 49.

¹⁵³Ltr, MATS/CC to ATLD/CC, *et al.*, "MATS Post Vittles Plans", 11 Aug 49.

¹⁵⁴Ltr, MATS/CV to CNTLD/CC, "Transition and Training of Pilot Personnel Being Redeployed From Vittles to MATS C-54/R5D Operations," 19 Aug 49; and rprt, MATS, "Weekly Diary, Training," 31 Aug 49.

for the first 12½ days of each phase. They would also move the remaining personnel and equipment as soon as possible.¹⁵⁵ Headquarters MATS recommended this rate of redeployment: to allow a prompt flow across the North Atlantic routes, to compensate for the lack of qualified ferry crews to deliver the aircraft from Westover, because of the time needed for processing, and because of the extensive maintenance the C-54s required.¹⁵⁶

Redeployment of VITTLES resources from Europe began 1 August and proceeded well ahead of schedule. Fifty-six C-54s had returned to the United States and four more were en route from Rhein-Main, surpassing the month's quota by 17 August. Parking and storage facilities at contractors' plants were full; therefore, the MATS Commander suspended the flow of C-54s until September, but the influx of returning aircraft continued to exceed expectations.¹⁵⁷ By 28 August 75 aircraft, including 21 R-5Ds, had left Europe, with 152 C-54s still in the theater.¹⁵⁸

After this initial outburst of return activity, the flow of C-54s from Europe to the reconditioning facilities in the United States continued at a steady rate. The last group of 37 departed 5 December for either low-time or 1000-hour maintenance.¹⁵⁹ By early December 1949 MATS had distributed: 11 C-54s to the Alaskan Air Command; 15 to FEAF; 40 to the Continental Air Command; two to AMC; 37 to USAFE; and nine C-54s to SAC.¹⁶⁰ By the end of the month MATS planned to deliver 15 more C-54s to FEAF, 36 more to USAFE, and another one to AMC.¹⁶¹ Headquarters MATS' allocation of C-54/R-5D aircraft reached the level projected for the third quarter of Fiscal Year 1950 by 9 January 1950.

The headquarters of the Combined Airlift Task Force, organized on 14 October 1948, was deactivated on 1 September 1949, and General Tunner, Task Force Commander, resumed his duties as MATS Deputy Commander for Operations. By 31 October 1949 the phase-out was virtually complete, and by

¹⁵⁵Plan, MATS, "Vittles Withdrawal Plan," appendix; and, msg, USAFE/CC EAFDA 3469 to CSAF, n.s., 30 Jun 49.

¹⁵⁶Msg, MATS CL-1282 to USAFE/CC, n.s., 12 May 49.

¹⁵⁷Msg, MATS 17H-77 to USAF/DO, n.s., 17 Aug 49.

¹⁵⁸Rprt, MATS/DO, "Weekly Diary, Operations," 31 Aug 49; and MATS Headquarters Letter No. 13, 1 Sep 49. The schedule called for 155 airplanes to still be in Europe by the end of August.

¹⁵⁹Rprt, MATS/DO, "Weekly Diary, Operations," 14 Sep and 15 Dec 49.

¹⁶⁰*Ibid.*, 7 Dec 49.

¹⁶¹*Ibid.*, 28 Dec 49.

the end of the year MATS was flying the familiar foreign and domestic routes at the same level of activity as before the Berlin Airlift.¹⁶²

AN AIRLIFT TALLY

In terms of sheer numbers, it would be an understatement to call the Berlin Airlift impressive. It delivered a total of 2,325,509.6 tons of food, fuel, and supplies to Berlin in 15 months and transported 227,655 passengers either into or out of the city. (See Table 4 for a full breakdown and Table 5 for a monthly summary. Table 6 reflects the flying hours, missions, and safety of the operation.)

TABLE 4

CARGO TRANSPORTED DURING BERLIN AIRLIFT

26 June 1948-30 September 1949

(All figures in Tons)

CARGO INBOUND

	<u>Food</u>	<u>Coal</u>	<u>Other Goods</u>	<u>Total</u>
U. S.	296,319.3	1,421,118.8	66,134.6	1,783,572.7
U. K.	240,386.0	164,910.5	136,640.4	541,936.9
Totals	536,705.3	1,586,029.3	202,775.0	2,325,509.6

CARGO OUTBOUND TO U. S. AND BRITISH ZONES

U. S.	45,887.7
U. K.	35,843.1
Total	81,730.8

PASSENGERS FLOWN

	<u>Inbound</u>	<u>Outbound</u>	<u>Total</u>
U. S.	25,263	37,486	62,749
U. K.	34,815	130,091	164,906
Total	60,078	167,577	227,655

SOURCE: News Release, USAFE Office of Information, "Berlin Airlift Status," n.d.

¹⁶²Msg, CSAF AFCAG-13A 43676 to USAFE/CC, n.s., 31 Aug 49; and msg, MATS 2J-24 to PACD/CC, n.s., 2 Sep 49.

TABLE 5
AIRLIFT OPERATIONAL SUMMARY
TONNAGE DELIVERED

<u>Total</u>	<u>U. S. Tonnage</u>	<u>British Tonnage</u>	<u>Total Tonnage</u>	<u>U. S. Flights</u>	<u>British Flights</u>	<u>Total Flights</u>
Jun 48	1,199.0	205.0	1,404.0	474	26	500
Jul	39,971.0	29,034.7	69,005.7	7,550	5,978	13,528
Aug	73,658.1	45,344.5	119,002.6	9,770	8,372	18,142
Sep	101,846.7	37,776.2	139,622.9	12,904	6,825	19,729
Oct	115,792.2	31,788.6	147,580.8	12,135	6,100	18,235
Nov	87,979.3	25,608.6	113,587.9	9,047	4,305	13,352
Dec	114,567.2	26,870.9	141,438.1	11,660	4,832	16,492
Jan 49	139,218.8	32,740.4	171,959.2	14,095	5,397	19,492
Feb	120,394.6	31,846.1	152,240.7	12,043	5,043	17,086
Mar	154,475.0	41,685.7	196,160.7	15,530	6,633	22,163
Apr	189,957.2	45,406.5	235,363.7	19,130	6,896	26,026
May	192,271.4	58,547.1	250,818.5	19,366	8,352	27,718
Jun	182,722.9	57,602.1	240,325.0	18,451	8,094	26,545
Jul	201,532.2	51,557.8	253,090.0	20,488	7,104	27,592
Aug	55,940.0	21,818.6	77,758.6	5,886	3,098	8,984
Sep	<u>12,047.1</u>	<u>4,104.1</u>	<u>16,151.2</u>	<u>1,434</u>	<u>551</u>	<u>1,985</u>
Total	1,783,572.7	541,936.9	2,325,509.6	189,963	87,606	277,569

SOURCE: "Berlin Airlift: A USAFE Summary," 12-13.

TABLE 6
BERLIN AIRLIFT TOTALS
 26 June 1948-30 September 1949

TOTAL FLIGHTS

U. S.	189,963
U. K.	87,606

TOTAL HOURS FLOWN

U. S.	586,827
U. K.	Unknown

TOTAL AIRCRAFT MILES FLOWN BY C-47S AND C-54S

C-47	7,584,009
C-54	84,477,853
Total	92,061,862

U. S. FATALITIES DURING THE BERLIN AIRLIFT

USAF Officers	22
USAF Airmen	6
U. S. Navy Petty Officer	1
U. S. Army Private	1
U. S. Civilian	1
Total	31

U. S. AIRCRAFT ACCIDENTS

Major	70
Minor	56
Total	126

(Aircraft miles flown by USAFE's 5 C-82s, 1 C-97A, and 1 C-74 unavailable.)

SOURCE: News Release, USAFE Office of Information, "Berlin Airlift Status," n. d.

One of the keys to the successful delivery of so much cargo was the large number of aircraft involved in Operation VITTLES. The Combined Airlift Task Force was ultimately able to assemble a force of 225 C-54s or the Navy's equivalent, the R-5D, to support the operation. The RAF contributed another 101 aircraft: 40 Dakotas, 35 Yorks, and 26 Hastings. During the summer months the British also occasionally supplied amphibious aircraft which landed on the waterways of Berlin. These were especially useful in hauling salt, since amphibious aircraft resisted salt erosion.¹⁶³ The cost of the airlift was enormous. More than 100 separate USAF units participated (see Table 7 for the list, as of 14 March 1949) and USAFE estimated the total cost at \$116,689,517 (see Table 8 for the cost breakdown).

¹⁶³Collier, *Bridge Across the Sky*, 162; Goldberg, *History of United States Air Force*, 241.

TABLE 7
UNITS PARTICIPATING IN BERLIN AIRLIFT
 14 March 1949

Headquarters 60th Troop Carrier Group, Heavy
 10th Troop Carrier Squadron, Heavy
 11th Troop Carrier Squadron, Heavy
 12th Troop Carrier Squadron, Heavy

Headquarters 61st Troop Carrier Group, Heavy
 14th Troop Carrier Squadron, Heavy
 15th Troop Carrier Squadron, Heavy
 53d Troop Carrier Squadron, Heavy

Headquarters 317th Troop Carrier Group, Heavy
 39th Troop Carrier Squadron, Heavy
 40th Troop Carrier Squadron, Heavy
 41st Troop Carrier Squadron, Heavy

7169th Weather Reconnaissance Squadron

VR-6 (Naval Transport Squadron)

VR-8 (Naval Transport Squadron)

Headquarters and Headquarters Squadron, 313th Troop Carrier Wing

Headquarters 313th Troop Carrier Group
 29th Troop Carrier Squadron, Heavy
 47th Troop Carrier Squadron, Heavy
 48th Troop Carrier Squadron, Heavy

Headquarters 313th Maintenance and Supply Group
 313th Maintenance Squadron, Troop Carrier, Heavy
 313th Supply Squadron, Troop Carrier, Heavy

Headquarters and Headquarters Squadron, 313th Air Base Group
 313th Finance Disbursing Unit, Troop Carrier, Heavy
 313th Communications Squadron, Troop Carrier, Heavy
 313th Installations Squadron, Troop Carrier, Heavy
 313th Air Police Squadron, Troop Carrier, Heavy
 313th Food Service Squadron, Troop Carrier, Heavy
 313th Motor Vehicle Squadron, Troop Carrier, Heavy
 313th Base Service Squadron, Troop Carrier, Heavy

Headquarters and Headquarters Squadron, 7480th Air Force Wing

Headquarters 7481st Maintenance and Supply Group
 7482d Maintenance Squadron
 7483d Supply Squadron

TABLE 7 (CONT)

UNITS PARTICIPATING IN BERLIN AIRLIFT

Headquarters and Headquarters Squadron, 7484th Air Base Group
 7485th Finance Disbursing Unit
 7486th Communications Squadron
 7487th Air Police Squadron
 7488th Food Service Squadron
 7489th Installations Squadron
 7490th Motor Vehicle Squadron
 7491st Base Service Squadron
 7492d Station Medical Group

Headquarters 513th Troop Carrier Group, Special
 330th Troop Carrier Squadron, Special
 331st Troop Carrier Squadron, Special
 332d Troop Carrier Squadron, Special
 333d Troop Carrier Squadron, Special

Headquarters 513th Maintenance and Supply Group
 513th Maintenance Squadron, Troop Carrier Special
 513th Supply Squadron, Troop Carrier Special

Headquarters and Headquarters Squadron, 513th Air Base Group
 513th Finance Disbursing Unit, Troop Carrier, Special
 513th Communications Squadron, Troop Carrier, Special
 513th Installations Squadron, Troop Carrier, Special
 513th Air Police Squadron, Troop Carrier, Special
 513th Food Service Squadron, Troop Carrier, Special
 513th Motor Vehicle Squadron, Troop Carrier, Special
 513th Base Service Squadron, Troop Carrier, Special
 513th Station Medical Group

Headquarters and Headquarters Squadron, 61st Air Base Group
 61st Finance Disbursing Unit, Troop Carrier, Heavy
 61st Communications Squadron, Troop Carrier, Heavy
 61st Installations Squadron, Troop Carrier, Heavy
 61st Air Police Squadron, Troop Carrier, Heavy
 61st Food Service Squadron, Troop Carrier, Heavy
 61st Motor Vehicle Squadron, Troop Carrier, Heavy
 61st Base Service Squadron, Troop Carrier, Heavy

Headquarters, 61st Maintenance and Supply Group
 61st Maintenance Squadron, Troop Carrier, Heavy
 61st Supply Squadron, Troop Carrier, Heavy
 61st Station Medical Group

TABLE 7 (CONT)

UNITS PARTICIPATING IN BERLIN AIRLIFT

Headquarters 7155th Maintenance and Supply Group
 7156th Maintenance Squadron
 7157th Supply Squadron

Headquarters and Headquarters Squadron, 7160th Air Base Group
 7161st Air Police Squadron
 7162d Food Service Squadron
 7163d Installations Squadron
 7164th Motor Vehicle Squadron
 7170th Station Medical Group

Headquarters and Headquarters Squadron, 7350th Air Base Group
 7351st Maintenance and Supply Squadron
 7352d Air Police Squadron
 7353d Installations Squadron

18th Weather Squadron Detachment 18-29

18th Weather Squadron Detachment 18-33

18th Weather Squadron Detachment 18-36

18th Weather Squadron Detachment 18-52

18th Weather Squadron Detachment 18-55

18th Weather Squadron Detachment 18-56

1945th Airways and Air Communications Service Squadron

Detachment 1945-1 Airways and Air Communications Service Squadron
 1946th Airways and Air Communications Service Squadron

Detachment 1946-2 Airways and Air Communications Service Squadron
 1966th Airways and Air Communications Service Squadron

Detachment 1966-1 Airways and Air Communications Service Squadron
 1947th Airways and Air Communications Service Squadron

Detachment 1947-1 Airways and Air Communications Service Squadron

SOURCE: General Orders No. 16, Department of the Air Force, Washington,
 14 Mar 49.

CONSOLIDATED AIRLIFT DOLLAR COSTS

COST DESCRIPTION	COST CODE #	TOTAL COST	HQ 1st ALTF	WIESBADEN	TEMPELHOF	RHEIN/MAIN	FASSBERG	CELLE	ERDING	OBERPFAFFEN-HOFEN	BURTONWOOD
COMMANDER & STAFF	01051	1 459 463	289 521	86 100	125 713	451 708	229 261	167 186	83 421	—	26 553
ADMIN. & SERVICES O.H.	02061	1 093 703	118 861	121 830	38 717	277 687	159 980	170 676	174 791	—	31 161
MOTOR POOL	02136	1 624 482	—	134 240	82 393	630 032	338 701	161 126	208 459	18 373	51 158
BASE OPERATIONS	02142	1 072 685	4 942	139 145	251 450	503 291	93 316	34 038	20 556	4 022	21 925
WEATHER SERVICES	02144	579 848	—	170 990	121 962	224 631	14 516	30 612	10 560	—	6 577
AACS & CONTROL TOWER	02146	2 490 270	—	392 154	538 741	1 159 523	229 596	103 236	19 740	—	47 280
TRAFFIC	02148	510 277	2 336	109 550	65 233	214 778	77 176	33 561	4 684	—	2 959
MISC. SERVICES	02150	3 343 674	77 232	220 047	228 471	1 225 546	540 010	477 119	434 985	463	139 801
INSTALLATIONS	02261	1 502 801	484	137 565	387 748	615 212	74 908	82 732	128 231	26 697	49 224
MAINT.—AUTO & EQUIP.	02302	709 061	—	54 206	64 723	287 982	133 325	67 553	70 543	18 835	11 894
MAINT.—ADMIN. AIRCRAFT	02306	248 391	—	70 766	3 451	13 706	65 425	32 957	58 340	—	3 746
MEDICAL	03277	501 178	1 102	44 069	36 720	180 644	78 222	80 822	53 179	—	26 420
UNDISTRIBUTED CHARGES	04151	8 354 734	170 950	805 577	425 293	3161 329	1 585 534	1 162 219	677 636	113 844	2 52 352
MAINT. & SUPPLY O.H.	05050	507 375	35 507	56 209	13 598	126 531	86 357	102 828	34 976	3 338	48 031
MAINT.—AIRCRAFT	05102	2 458 227	—	178 298	25 250	1 293 360	218 165	267 530	—	475 624	—
MAINT. OTHER	05104	462 116	10 180	143 924	134 675	158 380	—	4 334	6 416	4 207	—
OTHER MAINTENANCE	05260	380 663	12 443	71 849	39 681	149 379	50 574	40 743	2 791	10 679	2 524
SUPPLY COST	05450	1 536 599	84 215	107 515	74 678	588 188	298 717	246 577	112 399	12 114	12 196
OPERATIONS & TRAINING	07061	2 294 304	219 539	325 708	1 334	1 086 896	333 861	319 431	—	7 535	—
FLYING PERSONNEL	07102	36 156 896	—	5 760 992	88 866	18 256 755	7 964 407	4 018 728	—	67 148	—
MAINT. (1st & 2nd ECHELON)	07110	7 084 429	—	1 373 516	76 130	3 458 971	1 687 051	464 386	—	24 375	—
OTHER OPER. & TNG. COST	07150	597 793	22 864	17 880	17 483	369 203	16 407	153 956	—	—	—
DEPOT MAINT. & SUPPLY	07770	2 831 130	—	—	—	244	—	—	1 782 116	449 471	599 299
CONSTRUCTIONS	12126	1 301 837	—	261 543	214 420	777 669	25 432	—	19 367	3 406	—
OTHER ADDITIONAL CHARGES	12150	1 809 780	2 830	213 342	93 901	1 188 140	82 590	76 908	133 844	4 804	13 421
SUB-TOTAL COST REPORT	15196	80 911 716	1 053 006	10 997 015	3 150 631	36 399 785	14 383 531	8 299 258	4 037 034	1 244 935	1 346 521
DEPRECIATION		20 544 422	6 536 324	1 844 357	—	7 180 544	2 646 559	2 314 538	—	22 100	—
29% USAF COST O.H.		1 447 169	1 447 169	—	—	—	—	—	—	—	—
SUB-TOTAL USAF COSTS		102 903 307	9 036 499	12 841 372	3 150 631	43 580 329	17 030 090	10 613 796	4 037 034	1 267 035	* 1 346 521
TRANSP. CORPS SUPPORT		5 121 908	78 400	824 762	2 072 201	2 146 545	—	—	—	—	—
BURTONWOOD NON USAF		8 664 302	—	—	—	—	—	—	—	—	** 8 664 302
GRAND TOTAL		116 689 517	9 114 899	13 666 134	5 222 832	45 726 874	17 030 090	10 613 796	4 037 034	1 267 035	10 010 823

* 26 JUNE - 31 DEC 48

** 1 JAN - 30 SEP 49

ASSESSMENT

The Berlin Airlift was significant for many reasons. In foreign relations it demonstrated the resolve of the United States to meet a Soviet challenge. American allies around the world regarded the airlift as a triumph of will, and it built the resistance and raised the morale of Berliners. According to historian Phillips Davison, "It changed people's attitudes toward the western powers, raised their esteem for western strength, and reassured those who were anxious." Furthermore, he believed, "It contributed toward a feeling of partnership, and served to establish a bond between Berlin and the West. It represented a blow struck in the cause of peace, freedom and democracy. Above all it made people feel that resistance could succeed."¹⁶⁴ One cannot overestimate the airlift's value as a morale booster to allies.

Neither can one exaggerate the value of the Berlin Airlift as a tool to impress the Soviet Union. At no time in their history prior to 1948 could the Soviets have mounted such an extensive operation. The size and extent of the airlift, the requirement for close coordination, and the resourcefulness of allied leadership all impressed the Soviet leadership. In the late 1940s Russians respected strength and the airlift was an outstanding example of allied muscle-flexing.



Nothing depicts the bond between the West and Berlin like this famous photograph of German children on the rubble left from World War II watching a C-54 bring food to sustain their city.

¹⁶⁴Davison, *Berlin Blockade*, 355.

The airlift affected Air Force doctrine as well. Operation VITTLES demonstrated, for example, that virtually any amount of cargo could be moved anywhere in the world with little concern for geography or weather, if proper support were available. The airlift provided valuable experience in operational techniques, air traffic control, and in aircraft maintenance and reconditioning. Many of the lessons of the Berlin Airlift are valid today.

Furthermore, as the editor of *Air Force Magazine* reflected in September 1948, "For the first time in history, the United States is employing its Air Force as a diplomatic weapon." He continued, "Today, in keeping with its coming of age as the nation's first line of defense, the USAF has taken on two big assignments in international affairs. . . . One is what has been called 'the return of American Air Force to Europe,' the arrival of two groups of Strategic Air Command B-29s in England." And, "The second is the Berlin Airlift." He concluded, "The first chapters of the 'role of air power in diplomacy' are being written here."¹⁶⁵ The Berlin Airlift proved for the first time what has been confirmed many times since: airlift is a more flexible tool for executing national policy than either fighter or bomber aircraft.

Fortune magazine writers agreed that the airlift was a significant step in the ability of air power to meet American commitments in Europe. "The lift has been a stunning lesson for strategic airmen," *Fortune* observed in November. "It is now possible to move by air en masse from the continental U. S. to any part of the world. The anomaly of a 300-mile-an-hour global strategic air force tied to a ten-knot convoy is on the verge of disappearance. Air power is capable of providing its own logistical system." The article concluded that by transforming the logistics of supply, the airlift made the United States a greater power in Europe and around the globe.¹⁶⁶

Operation VITTLES also contributed new insights into organization and hardware as well. General Tunner believed that the airlift could have been organized for greater efficiency. He remarked, "Far more successful than the Russians in hamstringing the Berlin Airlift were the same old bugaboos I had experienced in India—divided command for one, and conflict between senior officers dedicated to the technical and strategic functions of the Air Force and those of us who had built up some expertise in air transport."¹⁶⁷ He advocated for the remainder of his career the importance of designating a single major command as the sole manager of airlift for the Air Force.¹⁶⁸ Tunner's idea gained

¹⁶⁵John G. Norris, "Airpower in the Cold War," *Air Force Magazine*, Sep 48, 25-26.

¹⁶⁶Charles J. V. Murphy, "The Berlin Airlift," *Fortune*, 38 (Nov 1948):89-93, as quoted in Yergin, *Shattered Peace*, 387-88.

¹⁶⁷Tunner, *Over the Hump*, 186.

¹⁶⁸*Ibid.*, 189-97 and 322-24.

acceptance over the years and the first step was taken in 1956 by designating MATS as the DOD transportation operating agency for airlift. Finally, on 1 December 1974, all Tactical Air Command airlift resources joined those of MATS' successor, the Military Airlift Command, to unify all standard military airlift in one command.

The airlift also dramatized the need for larger transport aircraft to carry more tonnage in fewer missions. General Tunner noted that by the end of the operation, CALTF had as many aircraft available as the air flow through the corridors could accommodate, "There was a limit to the number of airplanes you could get into an airport in 1 day, so the answer to that was larger airplanes." Those associated with the CALTF fought for larger airlift aircraft for the rest of their careers. The C-124, with a 25-ton capacity compared to the C-54's 10-tons, was conceived during the Berlin Airlift. One hundred C-124s could have sustained an operation that required 225 C-54s.¹⁶⁹ Of course, the larger transport aircraft now being operated or being built could have sustained Berlin with even fewer flights. The C-5, for example, could have carried enough tonnage in only 17 missions to surpass the average daily delivery totals made by the C-54s.

Operation VITTLES was thus a magnificent effort. It accomplished its purpose of supplying the needs of a city of over 2,000,000 people for over a year. In one of the first major confrontations of the Cold War, it overcame the Soviet Union's blockade of Berlin without provoking war. It provided innumerable lessons in the establishment and management of a large-scale airlift. The Berlin Airlift set the precedent for the use of airlift in a noncombat setting to achieve foreign policy objectives. After 40 years, more than any other lesson, Operation VITTLES taught United States policy makers to rely on American air transport forces to project and sustain a presence anywhere in the world at any time.

¹⁶⁹Wittel, "Interview, Mr. Airlift," 5.

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INDEX

- Air Corridors to Berlin, 4, (see Figure 2, 9), 12, 30
- Aircraft, American, B-29, 53, 66; C-47, 5, 8, 11, 12, 13, 15, 16, 21, 22, 23, 60; C-54, 11, 13, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 37, 38, 39, 40, 43, 46, 50, 54, 55, 56, 57, 60, 67; C-74, 15; C-82, 23; C-124, 67; R5D, 23, 25, 26, 27, 60
- Aircraft, British, Dakotas, 11; Hastings, 60; Yorks, 19, 60
- Airlift Task Force, 10, 11, 12, 13, 16, 19, 22, 24, 25, 28, 29, 31, 34-39, 41, 42, 46, 47, 50, 54, 55; bases, 40-43; becomes Combined Airlift Task Force, 36; Commanders, Smith, 10, Tunner, 29; headquarters, 11, 35-36; Operations Monitoring Control Center, 43; Organization, 10, 34-39; Deactivated, 57
- Air Materiel Command, predecessor of Air Force Logistics Command, 34, 38, 57
- Air Safety Center, 4
- Air Traffic Controllers, 47-48
- Air Transport Command (ATC), 1
- Airways and Air Communications Service, 48
- Air Weather Service, 47
- Alaskan Air Command, 19, 20, 57
- Alaskan Airlines, 19
- Allied Control Council, 4, 5, 9
- American Overseas Airlines, 19
- Army Air Corps, 11
- Atlantic Division (MATS), 19, 20, 22, 24, 26
- B-29, 53, 66
- Bennett, Jack O., 43
- Berlin, 3, 4, 5, 6, 7, 8, 10, 11, 14, 16, 17, 18, 22, 31, 33, 36, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51-52, 54; Air corridors to, 4, 30; Airdromes, see Gatow, Tegel, Templehof; Airspace, 30, 44; Food and Fuel Requirements, 7, 8, 11; Population, 7; Sectors of, 1
- Berlin Blockade, Origins, 1-8; Beginning 24 Jun 1948, 6; Response to, 8-16; End of blockade, 54
- Birchard, G. R. Colonel, Commander, Provisional Troop Carrier Group, 13
- Bosum, Frederick, Major General, 38
- Brookley AFB, Alabama, 22
- Bunker, William, Colonel, 50-51
- Burtonwood Maintenance Depot, England, 37-39
- C-47, 5, 8, 11, 12, 13, 15, 16, 21, 22, 23, 60
- C-54, 11, 13, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 37, 38, 39, 40, 43, 46, 50, 54, 55, 56, 57, 60, 67
- C-82, 23
- C-124, 67
- Cannon, John K., Lieutenant General, Commander, USAFE, 31-32; Conflict with Tunner, 32, 56
- Cargo transported, see Table 4, 58; Table 5, 59
- Caribbean Air Command, 19
- Celle RAF Base, Germany, 34, 43
- Civil Aviation Authority, 47, 48
- Clay, Lucius D., General, American Commander in Berlin (picture, 3), 3, 5, 7-10, 17, 40-41, 54, 55
- Continental Air Command, 57
- Continental Division (MATS), 20, 22, 24
- Contract airlines, Pan American, 19; American Overseas, 19; Seaboard and Western, 19; Alaskan, 19
- Cost of Airlift, see Table 8, 64
- Currency reform, 5-6
- "Dakotas", 11
- Davison, Phillips, 65
- "Easter Parade", 34, 50-51, 54
- Eschborn Field, Germany, 21
- European Air Transport Service, 11

European Wing (MATS), 21, 26
 Fairfield-Suisun AFB, California, 22
 Far East Air Force, 20, 25, 27
 Fassberg RAF Base, Germany, 24, 34, 42, 43
 Forrestal, James V., Secretary of Defense, 17
 France, 1, 4, 6, 40
 Frankfurt Air Control Center, 13, 31
 Gatow airfield, Berlin, 24, 41
 Germany, Four zones, 1, (map 2); Currency reform, 5-6; Independence, 5-6; Ruhr Valley, 6; Constitution, 6
 Great Britain, 1, 4, 6, 16, 36, 38, 42, 43, 58, 59, 60; Airlift Commander Air Commodore J. W. F. Merer, 36; Bases in Germany, Fassberg; Gatow; Celle
 Great Falls AFB, Montana, 22, 55
 Halvorsen, Gail S., First Lieutenant, (picture, 47), 42, 49
 Harrison, Bertram, Colonel, Commander, 60th Troop Carrier Group, 12
 "Hastings", 60
 Haun, James R., Lieutenant Colonel, 22
 "Hump", 7, 16, 27, 36, 38, 50
 India-China Division, 47
 Kelly AFB, Texas, 21
 Kuter, Laurence S., Major General, Commander, Military Air Transport Service, (picture, 21), 22, 25, 29, 37, 47
 Lee, Walter S., Colonel, Commander, 61st Troop Carrier Group, 12
 LeMay, Curtis E., Lieutenant General, Commander, United States Air Forces Europe, 5, 8, 10, 11, 18, 19, 25, 31, 37, 40
 "Little Airlift", 5
 "Little Vittles", 49-50
 Liverpool, England, 38; site of Burtonwood Depot
 Lovett, Robert A., Undersecretary of State, 16-17
 Luftwaffe, 51
 Marshall, George C., Secretary of State, 40
 McCullough, Campbell B., Captain, 13
 Merer, J. W. F. Air Commodore, British Airlift Commander, 36
 Military Air Transport Service, 10, 19, 20, 21, 22, 24, 25, 26, 27, 29, 32, 55, 56, 57, 67; Atlantic Division, 19, 20, 22, 24, 26; Continental Division, 20, 22, 24; Pacific Division, 20, 22, 24
 Milton, Theodore R. Colonel, Airlift Task Force Chief of Staff, 31-32, 39, 40, 41, 42
 "mini-blockade", 5
 Murphy, Robert, State Department, 4
 National Security Council, 8, 16, 17, 40, 41
 National War College, 1
 Norstad, Lauris, Lieutenant General, Deputy Chief of Staff Operations, USAF, 18
 Oberpfaffenhofen maintenance depot, Germany, 31, 35, 37
 Oklahoma City, Oklahoma, 37
 Operation MANNA, 21-22, 26
 "Operation Plane Fare" British code name for Operation VITTLES, 11
 Organizations (U. S.) Contributions to Airlift, Airways and Air Communications Service, 48; Air Weather Service, 47; Alaskan Air Command, 19, 20, 57; Atlantic Division (MATS), 19, 20, 22, 24, 26; Caribbean Air Command, 19; Continental Division (MATS), 20, 22, 24; European Air Transport Service, 11; Far East Air Force, 20, 25, 27; Military Air Transport Service, 10, 19, 20, 21, 22, 24, 25, 26,

- 27, 29, 32, 55, 56, 57, 67; Pacific Division (MATS), 20, 22, 24; Tactical Air Command, 19, 24, 67; Troop Carrier Command, 20, 21, 22; United States Air Forces Europe, 8, 11, 22, 24, 28, 31, 32, 34, 38, 55, 56, 57, 60; United States Navy, 23, 24, 25, 37, 55, 56
- Pacific Division (MATS), 20, 22, 24
- Pan American Airlines, 19
- Powell, Russell, Captain, 13
- R5D, 23, 25, 26, 57, 60
- Repair depots, 16, 36-37; see Oberpfaffenhofen, Burtonwood
- Rhein-Main AB, Germany, 13, 21, 24, 25, 26, 31, 40, 42, 43, 48, 57
- Royall, Kenneth C., Secretary of the Army, 5
- Ruhr Valley, 6
- Seaboard and Western Airlines, 19
- Smith, Joseph, Brigadier General, First Commander of Airlift Task Force, (picture, 10), 10-16, 31, 34, 37, 40, 43, 50
- Soviet Union, 1, 4, 5, 6, 7, 8, 16, 17, 49, 50, 51-52, 55, 65, 67; Commander in Germany, Marshal Georgi K. Zhukov, 3; Blockades Berlin, 6; Harass Airlift, 52-53; Ends blockade, 54
- Stalingrad, 51
- Stimson, Henry L., former Secretary of War, 5
- Strategic Air Command, 57, 66
- Symington, Stuart, Secretary of the Air Force, 38
- Tactical Air Command, 19, 24, 67
- TASS, Soviet news agency, 54
- Tegel airfield, Berlin, 40-41
- Tempelhof Airdrome, Berlin, 8-10, 13, (picture, 14), 16, 24, 31, 33, 40, 41, (picture, 45), 45, 46, 48
- Tomlinson, Daniel W., Rear Admiral, Commander, Pacific Division, 25
- Troop Carrier Command, 20, 21, 22
- Truman, Harry S., President, 15-16
- Tunner, William H., Major General, Commander, Airlift Task Force, (picture, 27), 34, 42, 49, 51, 57, 66-67; airlift philosophy, 32-34; appointed Task Force Commander, 29; conflict with Cannon, 31-32; critical decisions, 39, 45-48; "Easter Parade", 50-51, 54; maintenance philosophy, 36-39; "Willie the Whip", 33; steps down, 25; Airlift Commander, 57
- United States Air Forces Europe, 8, 11, 22, 24, 28, 31, 32, 34, 38, 55, 56, 57, 60; Commanders, see Lemay, Cannon
- United States Army Air Forces, 1
- United States Commander in Germany, General Lucius D. Clay, 3
- Vandenberg, Hoyt S., General, Air Force Chief of Staff, 17, 29, 38
- Weather, 17, 39, 46-47, 50, (picture, 51); Improved forecasting, 46-47
- Webster, Robert M., Major General, 1; Commander Air Transport Command (1947)
- Wedemeyer, Albert C., Lieutenant General, Director, Plans and Operations Army, 7
- Westover AFB, Massachusetts, 22, 26, 29
- White, John W., Colonel, Task Force Plans Officer, 42
- Wiesbaden AB, Germany, 8, 11, 12, 21, 24, 29, 31, 34, 40, 42, 43
- World War II, 1, 7, 37, 51
- "York", 19, 60
- Zhukov, Georgi K., Marshal, Soviet Commander in Germany, 3

